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OUTSTANDING ENTOMOLOGICAL FEATURES IN THE UNITED STATES FOR JULY, 1931

The paramount feature of the month is the devastating grasshopper outbreak in the Great Plains which is said to be the most serious of any since the early settlers were demoralized by the invasion of the Rocky Mountain locust in the decade between 1868 and 1880. Serious grasshopper outbreaks were quite generally reported from New York westward to Idaho, Nevada, and Arizona, and southward to Arkansas, Oklahoma, and Texas.

The severe outbreak of the variegated cutworm which was reported during June in the West-Central States was followed in July by a similar outbreak of this same insect in the North-Central States.

Late sweet corn on over one thousand acres of land in San Diego and Los Angeles Counties, Calif., was practically ruined by an undetermined climbing cutworm.

The fall armyworm appeared in destructive numbers in the Everglades of Florida and in the Mississippi delta of Louisiana during July. This is two months later than it appeared in destructive numbers in the Gulf Region last year.

The painted lady butterfly was quite generally reported from New England to the Dakotas, the larvae feeding on hollyhock and burdock.

The chinch bug seriously damaged corn in southern Illinois, central Missouri, and southern and central Kansas. It also did some damage to this crop in northern Ohio. This insect seems to be building up an abnormal population north of the normal chinch-bug belt in South Dakota and Iowa.

The corn ear worm was more numerous during July in the North-Central States than it has been for several years and in Nebraska is doing more damage during this July than any July in the past 30 years.

An interesting account of the variegated fritillary (Euptoieta claudia Cram.) doing commercial damage to beans, sweetpotatoes, and melons in Tennessee was reported in late June.

Correction: Outstanding Features, July 1 Bulletin, page 242, last paragraph under Mexican fruit worm. Damage referred to was in April instead of June as might be inferred. See same number of the Bulletin page 315.

The establishment of a considerable colony of Bruchus bruchialis Fahraeus attacking vetch in the field near Haddon Heights, N. J., and infested material from Delaware and Maryland was discovered during the month.

The peak of 1st-brood codling moth emergence in the Hudson River Valley occurred about July 7. The second-brood moths started to emerge in central Ohio about July 9, but up to July 20 no emergence had been observed in the fruit belt along Lake Erie. Severe infestations were reported quite generally in the eastern part of the United States. Band counts in western Illinois indicate that the population is 10 times as great as at the same time last year, and in eastern Illinois about 25 times as great.

Considerable damage is being done by the grape leafhopper from New Jersey westward to Ohio.

Blister beetles as usual are now attracting a great deal of attention on a variety of crops in the East-Central and West-Central States, Say's blister beetle becoming quite numerous in New England and in New York.

The false chinch bugs are very numerous over a large area in Iowa and Nebraska. They are also numerous in parts of Texas, Colorado, and South Carolina.

Colorado potato beetles were discovered on a city lot in Ogden, Utah, during late June. By the end of July it appeared that this infestation had been eliminated.

The potato leafhopper with the associated hopperburn is prevalent in the East-Central States, southward to Kentucky and westward to Iowa and Minnesota.

Larvae of the Mexican bean beetle were collected during the month in Washington County, Rhode Island. Considerable damage was done by the first generation of this insect in Connecticut. It was reported for the first time from Esopus and Port Ewen, New York. In the older infested region in the southern Middle Atlantic States but comparatively little damage is being done by this insect.

The squash bug is being reported much more frequently than last year from the Middle Atlantic States, southward to Georgia, Alabama, and Mississippi. It was also reported as doing serious damage in Iowa and Utah. In Idaho, where it was first discovered in 1929, it is now quite generally destructive over the southwestern part of the State.

A serious outbreak of the beet webworm is occurring in parts of Wyoming. The insect is also unusually abundant in Montana, and North Dakota. In Wyoming the insect seriously damaged beans into which they migrated from near-by fields.

The elm leaf beetle, reported as occurring in southern New England in the last number of the Insect Pest Survey Bulletin, was reported during July from New Hampshire southward along the Atlantic Coast to Maryland with occasional outbreaks in Ohio and Kentucky.

The spruce budworm is defoliating large areas of balsam fir and several species of pine in Wisconsin and parts of North Dakota. This insect was discovered for the first time in Cody Canyon, Wyo., in 1926, and since that time it has spread over a tremendous acreage and has destroyed large areas of Douglas fir.

About 43,000 acres of poplar has been defoliated in Maine by the poplar leaf roller, Cacoecia conflictana Walk.

Eye gnats have been very annoying along the South Atlantic Seaboard from Maryland to Georgia and around the Gulf to Mississippi.

OUTSTANDING ENTOMOLOGICAL FEATURES IN CANADA FOR JULY, 1931

The severe outbreak of the pale western cutworm in Saskatchewan and eastern Alberta drew to a close late in June. In addition to this species, the red-backed cutworm occurred in injurious numbers over a wide area in Saskatchewan, particularly in park sections. It was widespread in Manitoba, notably in central and northern areas, and reports of its prevalence in Alberta were also received. Cutworm injury has been severe in many parts of British Columbia and damage by cutworms also has been reported from various sections of eastern Canada, although, except in southwestern Ontario, their attacks apparently were not particularly severe.

Moths of the army cutworm have been unusually abundant in the three Prairie Provinces, where they proved an annoying pest in and about houses.

In British Columbia, the Nicola and Okanagan valleys are largely free from grasshopper trouble, but a severe outbreak of the lesser migratory grasshopper in a section of the Fraser valley resulted in considerable loss to clover grown for seed. Damage due to grasshoppers, chiefly the clear-winged and lesser migratory grasshoppers, in Saskatchewan is widespread, particularly in south-central sections. Prevalent but localised outbreaks of the former species are occurring over a wide territory in Manitoba, notably in the southeastern part of the province. Grasshoppers continue on the upward trend in sections of Ontario and southern Quebec.

Important crop damage by wireworms of several species is occurring over a large area of Saskatchewan, and in east-central Alberta and southwestern Ontario.

Further reports from southern Quebec, southern Ontario, and southern Manitoba indicate that the Colorado potato beetle is definitely more abundant than usual in the above territories.

Heavy infestations of potato flea beetles are noted in the St. John River valley, New Brunswick, in southern Quebec, and in Ontario. Flea beetles are proving injurious to cruciferous crops in the Okanagan valley, British Columbia, and to sugar beets in Alberta.

The striped cucumber beetle is unusually numerous and destructive in the Annapolis valley, Nova Scotia, the St. John valley, New Brunswick, and in sections of southern Quebec and Ontario.

The cabbage maggot appears to be in outbreak form throughout southwestern Ontario and has done much damage to cruciferous crops. It is on the increase in the Lethbridge district, Alberta.

Evidence of a marked reduction in the European red mite infestation in the orchards of the Annapolis valley, Nova Scotia, is reported.

Throughout Manitoba, Saskatchewan, and Alberta the spidermite Paratetranychus ununguis Jac. is attacking planted spruce and, in the Riding and Duck Mountains, is seriously infesting native white spruce. The pest is increasing in importance each year, its development being particularly favored by the prevailing dry weather.

A moderate outbreak of the spruce budworm has been noted in the Porcupine district, Ontario, and an extensive outbreak of the eastern spruce bark beetle has been reported on the north shore of the St. Lawrence River, Quebec, in the Manicouagan River region.

The aphid species Dreyfusia piceae Ratz. is infesting much of the balsam in the southern part of New Brunswick, especially near the Atlantic coast, between St. John and St. Stephen.

GENERAL FEEDERS.

GRASSHOPPERS (Arididae)

Ohio T. H. Parks (July 21): Melanoplus atlantis, Riley, M. femur-rubrum DeG., and M. bivittatus Say are moderately to more abundant than usual in most parts of Ohio. (July 27): Grasshoppers are now quite common and calling for control measures in many places. County agents are prepared for poisoning campaigns and work is already started in a few western counties.

Illinois J. H. Bigger (July 20): Grasshoppers are attacking corn. They have destroyed 10 acres of soybeans in one field in Adams County.

Kentucky W. A. Price (July 23): Grasshoppers are very abundant on corn, tobacco, alfalfa, blue grass, and vegetables in central Kentucky. Just now tobacco is receiving the greatest amount of injury.

Wisconsin C. L. Fluke (June 30): Grasshoppers, Cannula pellucida Scudd., moderately abundant in Door County.

Minnesota A. G. Ruggles and assistants (July): Several hundred thousand acres of crops have been destroyed in Kittson and Marshall Counties. The species involved is principally Melanoplus bivittatus Say, with Cannula pellucida Scudd. becoming more predominant farther north in the State. M. mexicanus Sauss. and M. femur-rubrum DeG. are also quite prevalent. Dissosteira carolina L. is quite prevalent in Norman County. (Abstract, J.A.H.)

North Dakota J. A. Munro and assistants (July 17): A survey of Pembina County made lately showed that many fields of flax and small grain crops had been ruined by grasshoppers. Farmers, not only in this county but in many others, are actively engaged in applying poison bait to save their crops. Serious depredations also reported from Walsh, Golden Valley, Mountrail, La Moure, Kidder, Burke, and Ward Counties.

South Dakota H. C. Severin (June 29): Grasshoppers are very abundant. This State is experiencing its worst grasshopper outbreak in its history this year. The worst infested areas include Brule, Buffalo, Charles Mix, Gregory, Mellette, Jones, and Lyman Counties. Considerable damage is also being done in Stanley, Hughes, Sully, Dewey, Marshall, Codington, Clay, Bon Homme, Butte, Pennington, Brookings, and Clay Counties. The predominant species is Melanoplus bivittatus Say with a sprinkling of M. mexicanus Sauss., M. femur-rubrum DeG., and other species.

Iowa H. E. Jaques (July 24): Grasshoppers are very abundant in many localities throughout the entire State. The worst outbreak since 1918.

Missouri

F. M. Wadley (July 10): Grasshoppers are quite generally abundant, and in some spots injurious. Injury to alfalfa is most marked, but some damage to corn and soybeans is noted.

Nebraska

M. H. Swenk (June 15 - 30): The severe outbreak of grasshoppers, chiefly of the two-striped grasshopper (Melanoplus bivittatus Say), which by the middle of June included Knox, Boyd, eastern Keya Paha, and the northern parts of Holt and Rock Counties, developed during the last half of June to include not only all of Holt and Rock Counties, but thence south to the Platte River, in Hall, Buffalo, and Dawson Counties, west through Custer County and east to include Cedar County, thus including altogether all or most of sixteen Nebraska counties. Over this area there has been much damage in the alfalfa and small grain fields, and serious damage to corn is now starting as the small grains ripen and the grasshoppers get their wings. The other grasshopper-infested areas in the State have about the same status as was described in my previous report.

Kansas

H. R. Bryson (July 23): Grasshoppers are very abundant in several localities and in northwestern counties. Most destructive in western one-third of State. Grasshopper injury is on the increase in the State. Kansas weekly crop report for July 20 stated that grasshoppers have injured alfalfa in both western and eastern Kansas. If dry weather continues to retard crop growth injury from this pest will become more apparent.

Arkansas

Dwight Isely (July 23): The yellow grasshopper has been unusually abundant, outbreaks causing serious local damage in northwestern Arkansas and in bottomlands along the White and Arkansas Rivers.

Oklahoma

C. E. Sanborn and assistants (July 22): Grasshoppers are very abundant. Local outbreaks in numerous sections of central and southwest part of State.

Alabama

J. M. Robinson (July 23): Grasshoppers are moderately to very abundant in part of Lee County, in cotton fields.

Texas

Topeka Daily Capital (June 15): Hordes of grasshoppers invaded the business section of El Paso last night and in some places piled up more than a foot deep. Police scooped up box loads and gave them to fishes in public parks.

Montana

R. W. Gjullin (June 30): Melanoplus bivittatus Say and M. femur-rubrum DeG. are moderately abundant in the central valley and in the eastern part of State.

Wyoming

A. G. Stephens (July 20): Grasshoppers are very abundant in the northeastern and eastern sections of the State.

C. L. Corkins (July 20): The only new development in the grasshopper situation in Wyoming is the extension of the outbreak into the lower North Platte River Valley, particularly Goshen County.

Colorado

C. P. Gillette (July 22): Grasshoppers are very abundant generally in the eastern Colorado plains. To date the Experiment Station has put out poison enough to treat 200,000 acres with arsenic-bran mash.

Idaho

C. Wakeland (July 23): Grasshoppers, numerous species, are very destructive to farmers in some of the higher mountain valleys in northern Idaho, where control is difficult because of the large proportions of range land adjacent. Grasshoppers are causing serious injury to irrigated crops in many sections of southern and southeastern Idaho and considerable work is being done by individuals and small-scale organizations in control.

Nevada

G. G. Schweis (July 20): Grasshoppers are very abundant. Doing much damage to alfalfa and grain in Washoe County.

Utah

G. F. Knowlton (July 10): Grasshoppers are extremely abundant and causing serious damage to wheat, alfalfa, oats, barley, and many other crops in Utah. The lesser migratory locust (M. atlantis Riley) is usually the most abundant species encountered. The two striped locust (M. bivittatus Say), Packard's locust (M. packardi Scudd.), and several other species are encountered in damaging numbers in certain localities. This is the most serious grasshopper outbreak that has occurred so generally over Utah for a number of years.

Arizona

C. D. Lebert (July 28): Several species of grasshoppers, with M. differentialis Thos. and Trimerotropis sp. predominant, are still doing serious damage. Farmers are continuing use of hopper dozers and poison bran mash.

Oregon

D. C. Mote (July 13): C. A. Henderson, Klamath Falls, reports that so far grasshoppers have been kept in check, and tremendous kills were made in the Fort Klamath, Upper Klamath, marsh at head of the Williamson River, Sprague River, Sycan, and Upper and Lower Chewaucan. It is believed that 95 per cent of the early hatches were killed by the use of poisoned bran mash.

FIELD CRICKET (Gryllus assimilis Fab.)

North Dakota

J. A. Munro (July 18): The black field cricket is appearing in greater abundance in a number of counties than for the past few years. It is reported from McKenzie, Golden Valley, Williams, Burke, Grand Forks, Cass, and Traill Counties, both as a pest in houses and to field crops.

California

S. Lockwood (July 6): During the month of June reports came to this office indicating that the black field cricket (Gryllus

assimilis Fab.) was responsible for considerable damage to peaches in the northern part of Sacramento County. Later reports seem to indicate that the damage, if done by this insect at all, was very nominal and hardly of economic importance.

SPOTTED CAMEL CRICKET (Ceuthophilus maculatus Harr.)

Nebraska

M. H. Swenk (July 1): From Pierce County comes the report of a very unusual abundance of a common camel cricket which is threatening to do damage to alfalfa fields and pasture lands.

LUBBER GRASSHOPPER (Brachystola magna Gir.)

Texas

J. L. Webb (July 20): On July 7 O. G. Babcock reported that this large hopper has been quite numerous for the past two weeks and is quite evenly distributed about San Angelo, Sonora, Menard, and Junction.

Louisiana

W. E. Hinds (July 25): Lubber grasshoppers are moderately abundant on soy beans.

MORMON CRICKET (Anabrus simplex Hald.)

Washington

L. P. Rockwood (July 3): An outbreak of this species near Page, between the Northern Pacific Railroad and Snake River, was reported by County Agent Ingham. The crickets were seen June 27 and 28. On the latter date mating was in progress. Crickets damaged a strip of winter wheat along one side of a field. On June 28 most of them had left wheat but were found abundantly in the uncultivated rolling hills, especially where sage brush occurred above 1,000 feet. They were broken up into scattered groups over a wide area of pasture land. Wheat will be harvested as soon as weather permits and further damage this year is not expected. There is a considerable acreage of dry-land wheat north and east of the crickets. This may be damaged in other years if the crickets move down into the farming region.

CUTWORMS (Noctuidae)

Tennessee

C. M. Packard (July 6): The variegated cutworm (Lycophotia margaritosa saucia Hbn.) is present in small numbers in every armyworm horde observed. It seems to have been the species responsible for damage to clover fields attributed to the armyworm. It is present by the million in a 30-acre field of crimson clover near Belvidere, observed June 5. It caused some injury by eating leaves and stems. The heads were too nearly mature for much injury. Migration into corn across a lane was stopped by turning hogs into the lane. Pupae were common June 16. The first adult in cages appeared June 18. About 90 per cent of the worms were parasitized by tachinids.

Wisconsin

E. L. Chambers (July 22): An unusual outbreak of cutworms has occurred throughout the State this summer, and at the present time the variegated cutworms (Lycophotia margaritosa saucia Hbn.) are doing the most damage. In several localities, including Douglas, Bayfield, Barron, Kenosha, Milwaukee, Racine, Ozaukee, and Washington, the armyworms (Cirphis unipuncta Haw.) were associated with the variegated cutworms and did serious injury for several days until brought under control by parasites. Apparently the variegated cutworms were much slower to be parasitized. More than 600 farms in Ozaukee County were infested and many fields of sweet clover and alfalfa completely defoliated and much injury done to corn and potatoes before the poisoned bran could be spread. Large quantities of poisoned bran were prepared at the county seats and distributed at cost to farmers in Ozaukee and Washington Counties.

Minnesota

A. G. Ruggles and assistants (July): The serious cutworm situation of the spring has now abated and the only report of importance is one on the variegated cutworm (Lycophotia margaritosa saucia Hbn.) as being abundant on tobacco in Benton County. (Abstract, J.A.H.)

North Dakota

J. A. Munro (July 3): Just yesterday I had the first report of the Bertha armyworm (Barathra configurata Walk.) for the season. It is already destroying fields of flax in the western part of Grand Forks County. (July 18): Two reports of Bertha armyworm injury to flax are reported from Benson and Grand Forks Counties, respectively.

Montana

R. W. Gjullin (June 30): The pale western cutworm (Porosagrotis orthocentra Morr.) is moderately abundant in the northern, central, and eastern parts of the State. (June 30): Army cutworms, Chorizagrotis auxiliaris Grote, are very abundant in the central part of the State. (June 30): Adults of the army cutworm are very abundant in the north central and central parts of the State.

Oregon

L. P. Rockwood (July 3): Spots comprising in all about one-fourth acre in a 200-acre field were damaged June 5, 3 weeks after the maximum flight of moths. Spots failed to increase in size although cutworms, Agrotis ypsilon Rott., averaged 7 per square yard in these places. Probably birds cleaned up the small bands of cutworms.

California

S. Lockwood (July): An unidentified Noctuid larva has been responsible for very severe damage to field and sweet corn on about 1,000 acres in the Mission and Tia Juana valleys of San Diego County. Reports indicate that this same condition exists in parts of Los Angeles County. The later sweet corn will be entirely ruined and the tonnage of the field corn will be cut considerably. This pest destroys the tassels when they are still in the boot and seems to like the silks, ears, and forming cobs of the younger

ears and bores into the stalk of the corn plant. It is not uncommon to find as high as four or five worms to one corn plant. Our attention was called to this by Mr. R. R. McLean, County Agriculture Commissioner of San Diego County.

ARMYWORM (Cirphis unipuncta Haw.)

Virginia

H. G. Walker (July 24): Although the first generation of the armyworm did considerable damage in the Norfolk section, the second-generation larvae have not been observed in the field. This would seem to indicate that the parasites and predators of the armyworm had greatly reduced their numbers. The second generation of larvae reared in the insectary are now nearly full grown.

Ohio

T. H. Parks (July 21): The armyworm outbreak extended between June 20 and July 3. A high percentage of the larvae were parasitized but the moths emerged during the middle of July and were attracted to lights. Good results were secured from the application of poisoned bran mash bait and not much corn was destroyed on farms where this was used. The greatest area of infestation covered parts of six counties in the south central part of the State. Outlying reports came from some counties in southwestern Ohio.

Indiana

C. M. Packard (July 6): Outbreaks of the armyworm were reported from a number of places in the southern half of Indiana in early June. Excellent results were obtained with poisoned bran mash spread broadcast. The worms developed in timothy, barley, wheat, and rye fields, principally in the lower or richer spots which apparently had been most attractive to the ovipositing moths early in the spring. The crops were seriously injured or entirely ruined in a number of such areas. Migration to adjacent young corn and resulting injury to it was also observed.

Adult moths reared from both Indiana and Kentucky material proved to be the true armyworm (Cirphis unipuncta Haw.). Several tachinid and two hymenopterous parasites were reared. Parasitism was very heavy in Indiana and it seems doubtful if the next generation of worms will be seriously abundant. Parasites were also very abundant at Shelbyville, Ky., but seemingly not so much so as in Indiana. Many apparently healthy pupae are in the ground at Shelbyville and a sizeable second generation of worms this year is possible.

J. J. Davis (July 25): The armyworm appeared in destructive numbers in isolated points throughout the State. Definite reports were received as follows: Damaging rye, corn, timothy, etc., at Madison, Aurora, Logansport, Leroy, and in eight townships in Rush County where wheat was the principal crop damaged.

Kentucky

C. M. Packard (July 6): An outbreak near Shelbyville, Ky., visited June 17 and 23. More extended injury to barley seen in this area. The worms had finished feeding in some of the fields.

hence it was too late to apply control measures. Corn adjacent to barley was being destroyed.

Michigan

R. H. Pettit (July 1): Yesterday there appeared the first armyworm outbreak for Michigan for this year. It occurred at the Game Farm near Mason and about 20 acres of wheat were involved. (July 10): Armyworms have appeared in Presque Isle, Mason, Grand Traverse, and Ingham Counties. The attacks have not been so severe as at some times in the past, but considerable damage has been done.

Missouri

Daily Drovers Telegram (June 23): Severe and widespread outbreaks of armyworms have been discovered in southeastern Missouri, particularly in Scott County, according to Plant Commissioner K. C. Sullivan of the Missouri State Board of Agriculture.

Tennessee

C. M. Packard (July 6): In southern Tennessee some damage from the armyworm continued into first week in June. First pupae were observed in the field June 1 and practically all had pupated by June 12. The first adult in the cages/June 4. H. G. Cress, County Agent of Marshall County, put on a county-wide control campaign with poisoned bran broadcast over entire fields where infestation was present. This effort was so successful that the only loss in the county was to spring-planted clover and timothy in grain fields. In other counties where no such control effort was made there was much damage to oats, rye, barley, wheat, and corn. High parasitism by tachinids was observed in all localities. (C. Benton)

F. FALL ARMYWORM (Laphygma frugiperda S. & A.)

Florida

J. R. Watson (July 24): The most striking and newest development of the past month has been an outbreak of the fall armyworm. The outbreak has been very severe in the everglades (R. N. Lobdell), and locally severe as far north as Pinellas and Polk Counties. In the latter counties it has been mostly confined to crab grass. The worms are just appearing about Gainesville.

Louisiana

W. E. Hinds (July 25): The grass worm is now maturing in at least the second generation and complaint of light infestation on several hundred acres of sugarcane was received from West Baton Rouge Parish on July 17. Examinations showed that most of the larvae had entered the ground for pupation. Those remaining were full-grown and a very large percentage was parasitized. We do not anticipate serious injury from the next generation.

PAINTED LADY (Vanessa cardui L.)

New England

J. V. Schaffner, Jr. (July 21): Larvae of this species appeared on hollyhock in Massachusetts about the third week in June

and since then many collections were taken on hollyhock and burdock in several Massachusetts, New Hampshire, Vermont, and Maine localities, as far north as Rutland, Vt., and Bangor, Me. This species has not been reported to us since 1926.

Maine

H. B. Peirson (July 22): The painted lady was very abundant in Augusta on hollyhocks, July 20.

Ohio

E. W. Mendenhall (July 21): I find the painted lady infesting thistles in southwestern Ohio. It fastens leaves together and is now in the pupa stage. (July 21): There is some abundance of this insect. I find the painted lady on hollyhock in the pupal stage in a garden in Springfield.

Illinois

W. P. Flint (July 21): The painted lady butterfly larvae are reported very abundant in northern Illinois on Canada thistles and hollyhocks. Larvae have also been taken by members of our staff in soybean fields, especially in the eastern part of the State.

Minnesota

A. G. Ruggles (July 21): Very abundant all over the State and in many places damaging sunflowers and the hollyhocks. Also reported on lettuce and rape. Great glee for the most part because of the attack on thistle.

North Dakota

J. A. Munro (July 18): The painted lady or thistle butterfly is abnormally abundant over a large section of the State, particularly the eastern half. The caterpillars have been feeding largely on the Canada thistle and to a lesser extent on hollyhocks and a few other plants.

South Dakota

H. C. Severin (July 14): Caterpillars of the painted lady ^{thistle} reported general. Canada/chiefly is attacked though hollyhocks suffer considerably.

Nebraska

M. H. Swenk (July 1 - 15): During the early part of July a number of correspondents reported that the Canada thistles had been rather severely eaten by the larvae of the thistle butterfly.

WIREWORMS (Elateridae)

Maryland

E. N. Cory (July 9): Wireworms, Agriotes mancus Say, were received from J. H. Carter, County Agent, Oakland, Garrett County, who says that the worms appeared about ten days ago in a farmer's cornfield and have destroyed about one-half acre.

North Dakota

J. A. Munro (July 18): Wireworms were reported as abundant in Golden Valley County in corn which followed flax and in fields of corn and potatoes in McKenzie County, but scarce in Williams County, moderately abundant in Pembina County, and scarce in Morton County.

Nebraska

M. H. Swenk (July 1 - 15): A Saunders County correspondent reported a potato field that had been planted in an old orchard, among the tree stumps, to have the tubers badly eaten by the wireworm Melanotus communis Gyll. (July 1): Wireworms, M. pilosus Blatch., were very injurious in a corn field in Dodge County during the last week in June, about 30 acres being involved in the injury.

Idaho

C. Wakeland (June 30): The usual reports of wireworms damaging spring crops are being received by our office, especially from the irrigated districts of southwestern Idaho. The range of the insect seems to be extending in the Twin Falls area since we are receiving more reports from there this season. Damage in general is not being so severe as during other years but injury is reported on potatoes in several new localities.

SAND WIREWORM (*Horistonotus uhleri* Horn)

South Carolina

J. N. Tenhet (July 3): In the experimental plots at this station a half acre of late potatoes was very severely injured by the sandy-land wireworm. The yield of marketable potatoes was cut at least 75 per cent. (July 16): Adults are becoming very scarce, and larval attack seems to be slackening. Larval injury has been very severe this spring.

WHITE GRUBS (*Phyllophaga* spp.)

Georgia

O. I. Snapp (June 30): May beetles have completely defoliated some young European elm trees which were planted for shade in the city of Fort Valley. The beetles worked at night, and the owners were attributing the trouble to some disease, since no insects were observed on the trees during the day.

Wisconsin

C. L. Fluke (June 30): White grubs are very abundant in southern Wisconsin only. Hatching from June 20 to date.

North Dakota

J. A. Munro (July 18): White grubs caused light injury to garden crops in Hettinger County and were moderately abundant in parts of Walsh County.

C E R E A L A N D F O R A G E - C R O P I N S E C T S

WHEAT

HESSIAN FLY (Phytophaga destructor Say)

Ohio T. H. Parks (July): The Hessian fly has about doubled in population as determined through the annual wheat insect survey. No serious injury occurred to the present crop, which promises to be the largest in many years. The heaviest fly infestation is in the northeastern counties though it is now present in threatening numbers in nearly all sections of the State.

WHEAT STEM MAGGOT (Meromyza americana Fitch)

Minnesota A. G. Ruggles and assistants (July): More abundant than usual. As high as 10 per cent loss being credited to this insect in many wheat fields. (Abstract, J.A.H.)

North Dakota J. A. Munro (July 18): The wheat stem maggot has been noticeably present in the eastern counties of the State. Many fields in Traill County were reported to have suffered a loss of 10 to 12 per cent from this pest. A survey of fields in the Fargo vicinity shows a 2 to 3 per cent loss. In Richland County it is reported as causing a general loss of 0.5 to 1 per cent.

Nebraska M. H. Swenk (July 1): During the third week in June a few reports of an abundance of the wheat stem maggot were received from east central Nebraska, from Dodge County to Greeley County, but the damage was not widespread or very serious.

WHEAT STEM SAWFLY (Cephus cinctus Nort.)

Utah G. F. Knowlton (July 6): Six per cent of the culms in one wheat field examined at Hunter are infested by the western grass stem sawfly.

WHEAT JOINT WORM (Harmolita tritici Fitch)

Oregon D. C. Mote (July 13): T. H. Chamberlin reports that adults had practically disappeared from the fields on June 6 in the Molalla district, although stragglers were caught as late as June 12. The parasite Eurytoma parva Phillips was very abundant on both the 6th and the 12th, but very scarce on the 27th. First adults of the parasite Ditropinotus aureoviridis Cwf, June 12. They had not all issued from the overwintering stubble by June 27.

WHEAT STRAW WORM (Harmolita grandis Riley)

Utah G. F. Knowlton (July 21): Wheat straw worm counts made up to the present time are somewhat lower than the average for last year.

PLAINS FALSE WIREWORM (Eleodes opaca Say)

Nebraska M. H. Swenk (July 1): In Keith and Custer Counties a great abundance of the beetle of the plains false wireworm was reported during the last week in June. The beetles ate off young corn, oats, and cabbage plants at the surface of the ground, and in some instances did serious damage.

WHITE-LINED SPHINX (Celerio lineata Fab.)

South Dakota H. C. Severin (July 14): White lined sphinx caterpillars are abundant on tall dock but have been reported as doing injury to corn at Bruce. At times as many as 5 to 8 caterpillars are to be found on a single dock plant.

Idaho C. Wakeland (July 23): The white-lined sphinx moth is very abundant on weeds near Moscow. The infestation appeared alarming but abated before reaching wheat. Larvae very heavily parasitized.

BEET ARMYWORM (Laphygma exigua Hbn.)

California H. Ryan (July 20): A limited infestation of armyworms gave considerable concern to holders of residential property in the small area about 5 miles west of the center of town. They were migrating from a harvested grain field to city lots but were found to be feeding only on Anagallis arvensis (poor man's weather vane) and doing no damage to shrubs or plants. We reared adults which were determined as Laphygma exigua Hbn. (beet armyworm) by Dr. Comstock of the Los Angeles County Museum.

SAY'S STINK BUG (Chlorochroa sayi Stål).

Utah G. F. Knowlton (July 21): Says plant bug was found causing moderate damage in many northern Utah wheat fields before the grain became ripe. Serious damage was observed in only a few fields.

ENGLISH GRAIN APHID (Macrosiphum granarium Kby.)

Indiana J. J. Davis (July 25): The grain aphid was reported common on wheat heads at Kentland, Elkhart, and LaPorte, June 23-25.

Michigan R. H. Pettit (July 1): Grain aphids seem to be pretty well spread over the State this year. All specimens sent in prove to be those of the northern grain aphid and no Toxoptera have been found.

CORN

AN ARCTIID MOTH (Apantesis rectilinea French)

Tennessee

S. Marcovitch (July 2): Several new outbreaks of this insect reported from Lewisburg as doing serious damage to corn, tobacco and grasses.

AN ARCTIID MOTH (Apantesis phyllira Drury)*

Tennessee

C. M. Packard (July 6): Adults reared from larvae sent in by Mr. Benton from the April outbreak of this species in southern Tennessee were determined by Mr. Wm. Schaus as above. The last adult was seen in the field June 5. Field observations yielded no trace of second-brood larvae until a small infestation was seen on June 23 in a hillside pasture near Fayetteville, Tenn. On June 24 a considerable infestation of practically mature larvae was seen in a hillside pasture 8 miles northwest of Petersburg, Tenn. H. G. Cress, Marshall County Agent (Tenn.) reported (June 30) several outbreaks with damage to pastures up to 20 per cent and threatening injury to corn and tobacco. (C. Benton.)

CHINCH BUG (Blissus leucopterus Say)

Ohio

T. H. Parks (July 27): Chinch bugs have been reported damaging corn in several northern Ohio counties. There is no serious general outbreak in any part of the State, but the insect has increased rapidly during the past year. Excellent growing weather enabled corn to outgrow their attack.

Indiana

J. J. Davis (July 25): Chinch bugs were reported as moderately abundant in cornfields in Whitley County about the middle of July.

Illinois

W. P. Flint (July 20): Chinch bugs have been favored during the past month by dry weather over most of the heavily infested area. Serious damage to corn has resulted in a number of the south central and central counties with some scattered outbreaks outside of the generally infested area, the most northern of these being in Hancock County on the west side of the State.

South Dakota

H. C. Severin (July 14): Chinch bugs are again building up their population in south central South Dakota. There has been little damage as yet. (Charles Mix and Tripp Counties.)

Iowa

H. E. Jaques (July 24): Two serious infestations of chinch bugs are reported from Des Moines County.

*Correction: Volume XI, No. 4, p. 172, Apantesis phalerata Harr. should read Apantesis phyllira Drury.

Missouri

F. M. Wadley (July 10): The chinch bug is much more abundant than last year, and has injured corn adjacent to wheat fields considerably.

Nebraska

M. H. Swenk (July 20): Chinch bugs are scarce in a few southwestern counties.

Kansas

H. R. Bryson (July 23): The chinch bug is very abundant and continues to be a menace in south central and southeastern Kansas. The southeastern counties, which include the three tiers running as far west as Sumner County, are still suffering from the ravages of chinch bugs. Young kafir sorghums are being most injured, owing partly to dry weather which retards the growth of the plants. The farmers in the extreme southeastern counties planted a considerable acreage to flax and soy beans, and this practice tends to avoid losses from this pest.

CORN EAR WORM (Heliothis obsoleta Fab.)

Delaware

L. A. Stearns (July 22): The tomato fruit worm was reported as abundant at Camden, July 20.

Maryland

E. N. Cory (July 9): Adults of the corn ear worm appeared about the middle of June. Egg deposition at College Park up to this date has been rather light as compared with the last three years. The insect is less prevalent than this time last year. Injury to early tomatoes has been slight on the Eastern Shore. Early sweet corn also is being attacked. (Determined by L. P. Ditman.)

Ohio

T. H. Parks (July 15): Corn ear worm larvae were damaging early ripening tomato fruits and were causing a loss of from 5 to 10 per cent of the marketable fruits.

Illinois

W. P. Flint (July 20): Larvae of the corn ear worm have been sent in from several localities. In most cases the corn had not yet come into silk and the larvae had been feeding in the stalk.

Minnesota

A. G. Ruggles (July): Towards the end of the month this insect became rather abundant on sweet corn in several localities in the southern part of the State. (Abstract, J.A.H.)

South Dakota

H. C. Severin (July 14): It has been reported several times that every third hill has a worm in the forming ear.

Iowa

H. E. Jaques (July 24): The corn ear worm has been reported as very abundant in only the extreme western part of the State.

Missouri

F. M. Wadley (July 13): The work of the early generations of the corn ear worm, on leaves and tassel of corn, is much more noticeable than usual.

Nebraska

M. H. Swenk (July 1 - 15): Dozens of farmers in eastern Nebraska have inquired concerning the abundance of corn ear worms working on their corn, boring through the bud and downward in the stalk, and devouring the upper leaves and the tassels. The first reports of damage of this sort came from the counties bordering the Missouri River, from Cedar, Dixon, and Thurston Counties south to Otoe, Nemaha, and Richardson Counties. This damage began to be apparent along the Missouri River during the last few days in June. By the middle of July it was showing up in counties farther west, as far as Madison, Platte, and Lancaster Counties. In many fields this injury has been serious. Not for at least the past 30 years have caterpillars of this first brood been so numerous as they have this year. This great abundance of corn ear worms of the first brood indicates the probability of unusually heavy damage to the milky and maturing kernels of the corn during August and September by the second and third broods of ear worms.

Kansas

P. M. Gilmer (July 14): The corn ear worm (determined by Heinrich) has been observed causing injury to apples in an orchard near Belle Plaine. Much of the fruit was completely hollowed out, leaving merely a shell attached to the tree. The injury was confined to trees with branches drooping until they made contact with the soil, although fruit as high as 6 or 8 feet above ground was attacked. The original infestation was apparently in a heavy planting of winter vetch which was used as a cover crop in the orchard. This had not been cut at the time the larvae were taken, but a good many fruits even at some distance from the ground had been attacked.

H. R. Bryson (July 23): Damage from the corn ear worm has been quite noticeable in different parts of the State. Complaints have been received from as far west as Nashville and Great Bend. The first complaint sent in was from Ottawa, July 3.

Oklahoma

C. E. Sanborn and assistants (July 22): The corn ear worm is very abundant.

Alabama

K. L. Cockerham (July 9): During the month of June early fresh corn was heavily infested with the corn ear worm. Inspectors for the Bureau of Markets estimated that at least 90 per cent of the corn moving after the middle of the month was infested. A lot of this injury did not throw the corn out of grade because it was confined to the first inch and a half of the silk end of the ear, which is allowed by the Bureau of Markets. There were some cases, however, where damage increased while the corn was in transit.

Mississippi

State Plant Board, Press Release (June 29): The most outstanding damage reported was caused by the corn ear worm or tomato fruit worm, attacking the buds of large corn plants and the fruit of tomatoes in many parts of the State. In most cases the worms sent to this office were almost grown and the indications are that they will stop feeding before the crops are seriously injured.

Utah

G. F. Knöwlton (July 21): Reports of corn ear worm damage have been received.

CORN BILLBUGS (Calendra (Sphenophorus) spp.)

South Dakota

H. C. Severin (June 29): Corn billbugs (Sphenophorus aequalis Gyll.) have injured corn principally near drained lake bottom and sloughs in several localities in the State.

Mississippi

J. M. Langston (July 23): Specimens identified by A. F. Satterthwait as Calendra germari Horn were found injuring corn plants at Thorn on June 11.

GRAPE COLASPIIS (Colaspis brunnea Fab.)

Mississippi

J. M. Langston (July 23): On June 29 Inspector J. E. McEvilly reports slight injury by this insect to corn plants at Smithdale. On June 29 a correspondent at Woodville sent specimens of this species to us and wrote as follows: "They have eaten almost all of the leaves off of our grapes and they eat strawberries also."

THE LESSER CORNSTALK BORER (Elasmopalpus lignosellus Zeller)

Arizona

C. D. Lebert (July 28): On fifteen acres of hegari near Phoenix fifty per cent injury has resulted.

CORN ROOT APHID (Anuraphis maidi-radicis Forbes)

Tennessee

C. M. Packard (July 6): In early June a 10-acre field on creek bottom near Lynchburg was injured so badly by the corn root aphid as to require replanting. The field contained much Johnson grass. (C. Benton.)

CORN LEAF APHID (Aphis maidis Fitch)

Mississippi

J. M. Langston (July 23): A rather heavy infestation on graham and sorgain was reported on two properties at Glendora, Tallahatchie County, during the latter part of June.

SPOTTED CUCUMBER BEETLE (Diabrotica duodecimpunctata Fab.)

Tennessee

C. M. Packard (July 6): The southern corn root worm larvae in conjunction with the sugar-cane beetle (Euetheola rugiceps Lec.) destroyed about 10 acres of corn near Fayetteville, June 3, necessitating replanting. They also destroyed half of the stand in 30 acres of corn near Estill Springs, Franklin County, June 12 - 16. (C. Benton.)

A CERAMBYCID (Prionus fissicornis Hald.)

Nebraska

M. H. Swenk (July 1 - 15): In Merrick County during the first week in July a cornfield was found attacked by larvae boring in the stalks, from the bottom upward.

CARROT BEETLE (Lixyrus gibbosus DeG.)

Mississippi

F. A. Smith (July 20): Rough headed corn stalk borer abundant on stubble land in Tate and DeSoto Counties.

CORN SILK BEETLE (Luperodes varicornis Lec.)

Mississippi

J. M. Langston (July 23): Beetles belonging to the genus Luperodes and probably to the species L. varicornis were reported as injuring corn silk at DeKalb on June 23, cotton and corn plants at Barland on June 27, corn at Braxton on July 8, and cotton at Hazlehurst on July 2.

SOYBEANS

ASH-GRAY BLISTER BEETLE (Macrobasis unicolor Kby.)

Mississippi

J. M. Langston (July 23): On June 24 a correspondent at Fulton, Itawamba County, wrote as follows: "Infestation started a few days ago and the insects are literally eating the soybeans up now."

BEAN LEAF BEETLE (Corotoma trifurcata Forst.)

Mississippi

State Plant Board, Press Release (June 29): The bean leaf beetle has injured beans, cowpeas, and soy beans in a number of localities by feeding on the leaves. This injury is not likely to become serious unless the plants are small or the beetles unusually abundant.

Louisiana

W. E. Hinds (July 25): The bean leaf beetle is still very abundant in many fields of soy beans, causing an abundance of holes in the foliage.

VARIEGATED FRITILLARY (Euptoieta claudia Cram.)

Tennessee

C. M. Packard (July 6): Variegated fritillary larvae were observed doing commercial damage 4 miles northwest of Lewisburg, June 21. They were reported to have been in evidence 10 days. The larger portion of 13 acres of soy beans, and 1-1/2 acres of Kentucky Wonder beans, planted in corn have been destroyed, and there has been some injury to young corn. They have also been observed stripping all leaves from a half-acre of sweet potatoes and some were feeding on melon vines. The fields had a considerable growth of passion-flower vines, the favorite food plant, on which they were also feeding. Pupation is in progress. Adults are present in considerable numbers ovipositing on passion vines and ironweeds.

CLOVER

A LOOPER (Autographa biloba Steph.)

Tennessee

C. M. Packard (July 6): Pupae of Autographa sp. (probably biloba) were taken on May 30, by N. H. Brown, Lincoln County Agent, from the base of crimson clover plants on which larvae had probably been feeding in a field near Dechard. The first moth appeared at light about June 7. Thousands were flying about street lights at Fayetteville on the night of June 11. A few stragglers appeared at light the two or three preceding and following evenings.

CLOVER STND MIDGE (Dasyneura leuminicola Lintn.)

Oregon

L. P. Rockwood (July 3): The rains all through June after the 8th were very favorable for this pest, and there will probably be much more than a normal infestation of the seed crop in fields not cut for hay before June 6, in Willamette Valley.

ALFALFA

ALFALFA WEEVIL (Phytonomus posticus Gyll.)

Colorado

C. P. Gillette (July 22): The alfalfa weevil is moderately abundant in the western part of the State. There are no new areas of importance.

Idaho

C. Wakeland (June 30): Southwestern Idaho has been little affected this season and the danger point is now past. Quite severe injury occurs in alfalfa seed crops in the central and southeastern portions of the State and loss in general to seed crops where spraying is not conducted.

Nevada G. G. Schweis (July 20): The alfalfa weevil is very abundant in western Nevada. Larvae have pupated. Damage was severe in June.

Utah G. F. Knowlton (July 25): The alfalfa weevil is moderately abundant in the northern part of the State.

Oregon Oregon Agricultural College, Insect Pest Report (June): The alfalfa weevil is moderately abundant in Malheur County on alfalfa from Ontario to Nyssa.

ALFALFA THIRIPS (Frankliniella occidentalis Perg.)

California S. Lockwood (July 6): This thrips is perhaps in more than normal numbers in seed alfalfa fields in Contra Costa County. Growers there feel that because of this insect the seed crop will be shorter than usual. So far no indications of this have been observed.

ALFALFA LOOPERS (Autographa sp.)

Minnesota A. G. Ruggles and assistants (July): According to Professor Granovsky this insect is doing great damage to alfalfa at Renville. (Abstract, J.A.H.)

Mississippi J. M. Langston (July 23): Larvae belonging to the genus Autographa, and probably to the species Autographa brassicae Riley, were received from Meltonia, Bolivar County, on July 13, with the report that these insects had appeared in alfalfa fields and were doing considerable damage. Specimens were also received from Moorhead, Sunflower County, on July 14 with the report that these insects had appeared in considerable numbers in cotton fields.

ALFALFA CATERPILLAR (Eurytus curytheme Boisd.)

Minnesota A. G. Ruggles (July 21): The alfalfa butterflies have been flying by the millions in the Red River Valley and are found all over the State. No reports of damage by caterpillars have yet been received.

North Dakota J. A. Munro (July 18): Caterpillars of the alfalfa butterfly have been abundant in fields in most of the eastern part of the State. The adults have been sufficiently abundant to clog the radiators of tourist cars passing through. Many inquiries have been received concerning these butterflies.

Arizona C. D. Lebert (July 28): Adults and first-instar larvae are very abundant on alfalfa in the valley July 25. Millions of them were observed concentrating upon the uncut strips of the crop in fields where farmers were mowing.

COWPEAS

COWPEA CURCULIO (Chalcodermus acneus Boh.)

North Carolina W. A. Thomas (July 15): This insect is unusually abundant on cowpeas in this section and growers are complaining of the wormy condition of peas intended for table use. A large percentage of maturing seed have been punctured in feeding and egg laying.

South Carolina J. N. Tenhet (July 17): Early cowpeas are being very seriously injured by the cowpea pod weevil at Fairfax.

Mississippi H. Gladney (July 17): At Vancleave on July 3 the cowpea pod weevils were extremely numerous on cowpeas.

J. M. Langston (July 23): Specimens taken from cowpea vines were received from Philadelphia, Neshoba County, on July 20. Slight injury was reported.

PEA APHID (Illinoia pisi Kalt.)

Oregon L. P. Rockwood (July 3): The pea aphid has been reported attacking Austrian winter field peas in Washington County. Natural enemies gained control in early June. There was more reduction in the crop from dry weather in April and May than from aphid injury.

GRASS

SOD WEBWORMS (Crambus spp.)

Pennsylvania H. N. Worthley (July 22): Sod webworms (species not yet determined) are doing considerable damage to experimental plots of fine turf grasses.

Ohio N. F. Howard (June 10 - 29): At Columbus, Cincinnati, and the intervening area crambid moths are extremely abundant on pastures and meadows. They are so numerous that they covered the radiator, headlights, and windshield of the automobile after dark between Cincinnati and Columbus.

T. H. Parks (July 20): A species of crambus larva is now very seriously infesting blue grass in lawns and blue grass and bent grass in golf greens. Almost every golf course is infested and many lawns in the city of Columbus have brown patches in them where the larvae are feeding. The larvae live in webs at or just below the surface. They work in patches and are attacking the lawns that have had the best kept and thickest grass. Injury occurred early in July and

is still continuing. Reports of the work of the larvae reach us from Columbus, Cincinnati, Zanesville, Circleville, Chillicothe, Lancaster, Bucyrus, Washington County House and Newark. (July 22): Many webs now contain empty pupae cases from which the moths have emerged. Larvae are still doing damage.

Indiana

J. J. Davis (July 25): Sod webworms (Crambus sp.) were first reported to us by C. M. Packard, July 13, as damaging putting greens in a golf course near Lafayette. Since that date, July 14 - 23, we have received reports of damage to lawns by these webworms from Aurora, Putnam County, from Greenfield, Crown Point, Connersville, and Lafayette, and also one from Indianapolis.

Illinois

W. F. Flint (July 20): Sod webworms have been generally abundant and destructive in the northern part of the State as well as the central, many specimens being received from lawns and golf courses. The species most abundant is Crambus triseptus Walk.

J. H. Bigger (July 17): Webworms are very abundant, destroying lawns and golf greens over a large portion of western Illinois. They are damaging pastures materially.

Kentucky

W. A. Price (July 24): A sod webworm has ruined about one-half the lawns in the blue-grass section. In yards where lights were near by the destruction of the lawn is complete. The heavy flight of moths during June was attracted to the lights, where eggs were deposited. Tomato vines are failing to set fruit because of the blossoms wilting and dropping. This conditions prevails over central Kentucky.

Tennessee

C. M. Packard (July 6): Injury to corn and tobacco is quite general in Lincoln and adjacent counties. One cornfield under observation near Fayetteville had 30 out of 60 acres practically destroyed by webworms, there being from three to five larvae per hill. Johnson grass was equally attacked. Most of the larvae were mature by June 4.

A SCARABAEID (Ochrosidia immaculata Oliv.)

Louisiana

W. E. Hinds (July 25): This beetle has been extremely abundant at lights in Baton Rouge for several nights following a series of rains from July 11 to 16.

A CURCULIONID (Hyperodes porcellus Say)

Connecticut

R. B. Friend (July): Serious injury to several greens at the Farmington County Club was apparently due to this insect, the larvae eating the roots. The species was determined by Mr. Mutchler of the American Museum of Natural History as Hyperodes porcellus Say.

possibly H. porcellus, differing only in coloration on the ventral side. This insect was also found in dead patches of turf at Devon.

MEADOW FROGHOFFER (Philacrus spinarius Fall.)

Oregon

D. C. Mote (July 13): Wilcox reports that the spittle bug nymphs Philacrus spinarius began changing to adults the fore part of June in the Willamette River Valley. Specimens from Eugene and Coos County, apparently the same species, did not change to adults until about July 1. All apparently have transformed to adults now, July 8.

VETCH

A BRUCHID (Mylabris brachialis Fahraeus)

Middle Atlantic States During June, 1931, the writer collected a large number of specimens of Bruchus brachialis Fahraeus from a patch of vetch (Vicia sp.) at Haddon Heights, N. J. Judging from the enormous number of eggs which were being deposited on the pods, the percentage of infested seed will be high. The first adults to emerge from the new crop of seeds appeared July 15. This bruchid is one of several economically important bean weevils known to attack vetch in Europe, and is apparently the first to become established in the United States. My determination of the insect has been verified by Mr. J. C. Bridwell of Washington, D. C.

Adults of infested pods have been taken by the writer at the following New Jersey localities: Haddon Heights (several stations), Camden County; Moorestown, Vincentown, and Four Mile, Burlington County; and Newtonville, Atlantic County. At the writer's request Mr. D. F. Perry looked for patches of vetch on his recent trips to Maryland from New Jersey. He collected several plants from patches at Felton, Kent County, Delaware, July 1, and at Salisbury, Wicomico County, Maryland, July 15. Both lots are infested.

This bruchid has thus far been definitely associated with at least two species of vetch.

SUGARCANE

SUGARCANE BORER (Diatraea saccharalis Fab.)

Louisiana

W. A. Douglas (June 26): It was estimated that 5 per cent of the stalks of a field of Egyptian wheat were injured by the sugar cane moth borer. (June 26): Eight fields of corn in the Crowley section have been examined. Five of the eight fields had 100 per cent stalk infestation. In one field no bored stalks were found.

E. K. Bynum (June 29): Borers are rather plentiful around Houma and Raceland, but are more difficult to find in other sections.

W. E. Hinds (July 25): Sugarcane borer infestation is still light generally, especially in cane. The second generation is now maturing in corn and infestation in many cornfields is 100 per cent. This is especially true in the rice section where corn is unusually subject to severe damage. The transfer of moths from maturing corn to near-by cane will occur from August 1 on. Borer egg parasitization by *Trichogramma* from June 15 to July 15 has averaged about 19 per cent in uncolonized areas, 36 per cent in fields adjoining colonized areas, and 72 per cent in fields colonized June 13 and 26.

A WEEVIL (Anacentrus sp.)

Louisiana

J. W. Ingram and E. K. Bynum (June 25): A first-year stubble field near Arnaudville was almost totally ruined, and this was reported as possibly due to this small weevil. At this late date, however, it appeared that only about 10 per cent of the eyes had been killed by the weevil.

SUGARCAKE BEETLE (Euetheola rugiceps Lec.)

Tennessee

C. M. Packard (July 6): The adults of the sugar-cane beetle in conjunction with the southern corn root worm larvae destroyed about 10 acres of corn near Fayetteville, (June 3, necessitating replanting. They also destroyed half of the stand in 30 acres of corn near Estill Springs, Franklin County, June 12 - 16.

Louisiana

J. W. Ingram and E. K. Bynum (June 29): Numbers of dead beetles were found on the surface of the ground during the month. In rearing cages the number of eggs deposited decreased toward the end of the month, and none were laid after the 25th.

CORN LEAF APHID (Aphis maidis Fitch)

Louisiana

J. W. Ingram (June 25): In a survey trip in southern Louisiana small numbers were found on sugarcane, but considerable numbers on sorghum. This aphid is known to transmit the mosaic disease of sugarcane.

RICE

RICE WATER WEEVIL (Lissorhoptrus simplex Say)

Louisiana

W. A. Douglas (June 26): The rice water weevil situation is about as usual. The adults have caused some feeding scars on the plants, but not enough to be called injurious. Larvae are present in most fields. The farmers are beginning to realize that the water weevil is not an injurious pest of rice.

COTTON

COTTON LEAF WORM (Alabama argillacea Hbn.)

Texas

F. L. Thomas (July 22): The frequent rains during July throughout the State are favorable to the rapid multiplication and spread of this insect in Nueces, Hidalgo, San Patricio, and Refugio Counties. Worms were first found in Nueces County, June 27.

COTTON FLEA HOPPER (Psallus seriatus Reut.)

Oklahoma

C. E. Sanborn and assistants (July 22): The cotton flea hopper is moderately abundant.

Mississippi

J. M. Langston (July 23): Cotton plants that had evidently been injured by P. seriatus were received from the county agent at New Albany, on June 25. Complaints in regard to injury by this insect have been received from various sections of the State during the past month.

CORN SILK BEETLE (Luperodes varicornis Lec.)

South Carolina

A. Lutken (July 25): This chrysomelid beetle was reported as damaging cotton in Winnsboro County, July 21.

F R U I T I N S E C T S

APPLE

APPLE APHID (Aphis pomi DeG.)

Connecticut

P. Garman (July 23): Green apple aphids appeared in many orchards the latter part of June, but have decreased in numbers since the middle of July.

New York

N. Y. State Coll. of Agr., Weekly News Letter (July): During the month the apple aphid developed into a serious problem in some orchards in the Hudson River Valley. Towards the end of the month the situation had become very serious. In the western part of the State a very similar situation prevailed, in some cases necessitating the use of nicotine. (Abstract, J. A. H.).

New Jersey

N. J. State Coll. of Agr., Weekly News Letter (July): There are still a large number of green aphids on trees at the present time in Morris County.

Pennsylvania

H. N. Worthley (July 22): Green apple aphids are moderately abundant at State College.

WOOLLY APPLE APHID (Eriosoma lanigerum Hausm.)

Washington

M. A. Yothers (July 17): This aphid got an early start in March, April, and May but by mid-June it had been pretty well cleaned up by predators. During the past two or three weeks it has increased in tremendous numbers until it is now more abundant than usual at this time of year, in Wenatchee.

CODLING MOTH (Carpocapsa pomonella L.)

New Hampshire

L. C. Glover (July 22): The codling moth is moderately abundant. It is plentiful in certain orchards.

New York

N. Y. State Coll. of Agr., Weekly News Letter (July): The earliest codling moth larva to be observed in the extreme northeastern corner of the State in Clinton County was seen on June 20. During the middle of July codling moth injury was much more serious than at the same time last year. Poorly sprayed orchards are suffering from 20 to 60 per cent infestation in the Hudson River Valley. The bait pails indicate that the peak of moth emergence appeared about July 7. The first mature codling moth larva was found under bands on July 4. In the western part of the State emergence was at its peak about July 1. During the middle of July the amount of injury increased very materially.

New Jersey

N.J. State Coll. of Agr., Weekly News Letter (July): Second-brood side worms are now active in southern New Jersey. Counts made of first-brood injury indicate that the damage in most orchards is greater than last year.

Pennsylvania H. N. Worthley (July 9): Mature larvae started cocooning June 27. A few spring-generation adults are still about. The spring generation is very abundant at Biglerville, Adams County, as many as 22 stings per apple in well-sprayed Yorks. (July 22): Summer-brood moths are now emerging.

Delaware T. L. Guyton (July 27): The codling moth is very abundant in Franklin County.

Maryland L. A. Stearns (July 22): Second-brood eggs of the codling moth are now hatching; infestation is severe in some orchards; where supplementary control measures were practised and thorough spraying was accomplished injury is but moderate.

Georgia E. N. Cory and assistants (July): The first adults emerged at Hancock July 7.

Ohio C. H. Alden (July 20): The codling moth is very abundant at Cornelius. There are many stung and wormy fruits in commercial orchards. Second-brood moths are now laying eggs. Infestation is heavier than in 1930. The hot, dry weather of this year is ideal for multiplication.

Illinois T. H. Parks (July 21): This insect is much more abundant than usual in the orchards where it has been a problem. Second-brood moths commenced emerging in Lawrence County June 29, at Columbus July 9, and at Wooster July 13. No moths of the second brood have yet emerged along Lake Erie. More thorough spraying is in progress than for many years and in some orchards the amount of wormy fruit present in June indicated that the losses from the second brood would be heavy. The problem is most serious in the southern third of the State and in Ottawa County in northwestern Ohio.

Kentucky W. P. Flint (July 20): Infestations are generally heavy in south central, central, and western Illinois with scattered orchards showing very heavy infestation in the southern part of the State. Collections under bands in western Illinois have yielded about ten times the number of larvae taken from the same number of trees in the same orchard on the corresponding dates of 1930. In eastern Illinois approximately 25 times as many larvae have been taken under bands during the last three weeks as were taken last year.

Wisconsin C. O. Eddy (July 10-15): Pail-trap catches of the codling moth were very high during the period of July 10 to 15 at Henderson and Paducah.

Wisconsin C. L. Fluke (June 30): The codling moth is moderately abundant. The first-brood larvae began hatching about June 22 in central and southern Wisconsin.

Minnesota A. G. Ruggles and assistants (July): Codling moths are running from scarce to moderately abundant throughout practically the entire State. No very unusual abundance has been reported in any county. (Abstract, J.A.H.)

Iowa H. E. Jaques (July 24): The codling moth is moderately abundant over much of the State.

Missouri R. M. Jones (July 20): The peak of the second brood of the codling moth hatching is expected around July 28 to August 1. The infestation in different orchards varies considerably.

Nebraska M. H. Swenk (July 1-15): The flight of the spring brood of the codling moth began diminishing about June 20, and by the end of the month had dwindled so that moths were no longer being taken at the bait traps. By July 10 no spring-brood moths were left alive in our insectary, indicating the completion of that brood. The first moth of the first brood emerged on July 4. This is four days earlier than last year, seven days earlier than 1929, and nine days earlier than in 1928. Moths again appeared in the bait traps on July 6, and have since been taken in increasing abundance. The codling moth is building up an unusually heavy abundance in the first brood this year.

Colorado C. P. Gillette (July 22): Codling moths are very abundant in the fruit district generally.

Idaho C. Wakeland (June 30): The prolonged severe winds of early spring resulted in very poor spraying at the time of the first cover spray and caused the omission of sprays in some instances, which has resulted in a heavy infestation of first-brood larvae in the apples. While the overwintering population was not so large as some years, it is likely that severe injury will occur this season because of inadequate cover sprays on the first brood.

Nevada T. H. Parks (July 20): The codling moth is very abundant in western Nevada. Unsprayed fruit is all wormy.

Utah G. F. Knowlton (July 25): The codling moth is moderate to very abundant in the northern part of the State.

Washington E. J. Newcomer (July 21): Moths of the second brood began flying in some numbers July 8, and reached a high point July 20, which may be the maximum for the brood in Yakima County.

Oregon D. C. Mote (July 13): The first brood is over. The second brood had not started to emerge on July 8 in the Willamette Valley. (B. G. Thompson)

APPLE TREE LEAF ROLLER (Cacoecia argyrosoma Walk.)

New York

N. Y. State Coll. of Agr., Weekly News Letter (July): The first egg masses were observed in Ulster County on June 29 and a few days earlier the first eggs were observed in Dutchess County. (Abstract, J.A.H.).

Pennsylvania

J. N. Knull (June 24): There has been a very heavy infestation in Pike County. The larvae were found feeding on scarlet oak, red oak, white oak, rock oak, and scrub oak. Some oaks were entirely defoliated. First moths emerged about June 28. All of the moths emerged July 4.

SPRING CANKER WORM (Palaecrita vernata Peck)

Wisconsin

E. L. Chambers (July 21): Many farm orchards located along the eastern part of the State, where spraying is not thoroughly done, have been defoliated by the spring canker worm.

APPLE LEAFHOPPERS (Cicadellidae)

Massachusetts

A. I. Bourne (July 25): Apple leafhoppers are moderately to very abundant.

Connecticut

P. Garman (July 23): Leafhoppers appeared in considerable numbers early in the season, but have decreased during July. They are apparently decreasing in most orchards though nymphs of the second brood are showing up in limited numbers in New Haven and Hartford Counties.

New Jersey

N. J. State Coll. of Agr., Weekly News Letter (July): Leafhoppers have been noticed to be quite severe in most of the apple orchards visited in Cumberland County.

Pennsylvania

J. R. Stear (July 22): Very abundant in Ligonier.

Delaware

L. A. Stearns (July 22): Apple leafhoppers are rather abundant throughout the State.

Kentucky

C. O. Eddy (July 20): Infestations were becoming heavy in western Kentucky. July 17.

SAN JOSE SCALE (Aspidiotus perniciosus Comst.)

Wisconsin

E. L. Chambers (July 21): While the San Jose scale has been confined to less than a dozen counties in Wisconsin and has never until recently been found in farm orchards, it has been spreading and a dozen new localities have been added to the known infested areas, although none have been found in our commercial orchards, in Waukesha, Grant, and Jefferson Counties.

Mississippi

J. M. Langston and assistants (July): The San Jose scale has been reported as very serious from a number of counties during the month, in many cases causing the death of peach and other deciduous fruit. (Abstract, J.A.H.)

APPLE MAGGOT (Rhagoletis pomonella Walsh)

New York

N. Y. State Coll. of Agr., Weekly News Letter (July): Apple maggot flies began emerging in the lower Hudson River Valley the last week in June and the first injury was observed in Early Strawberry apples in Ulster County July 2. The flies were observed to be quite numerous during the middle of the month (Abstract, J.A.H.)

New Jersey

N. J. State Coll. of Agr., Weekly News Letter (July): Apple maggot flies have been discovered in three orchards.

Michigan

R. H. Pettit (July 10): The first adults of the apple maggot appeared in Berrien County on the 8th and 9th of July. This is about ten days later than the average emergence.

APPLE CURCULIO (Tachypterus quadrigibbus Say)

New York

N. Y. State Coll. of Agr., Weekly News Letter (July): In the northeastern corner of the State, in Clinton and Essex Counties, apple curculios were pupating by the middle of the month and a few adults had already emerged by July 13. Late in June the injury was severe in the southern half of the Champlain Valley. In one 10-acre block from 30 to 40 per cent of the fruit showed injury. (Abstract, J.A.H.)

APPLE FLEA WEEVIL (Orchestes pallicornis Say)

Ohio

J. T. Houser (July 10): The apple flea weevil is very destructive in one orchard in particular near Chillicothe. There has been a considerable decrease in abundance from 1930 at Amherst, and it is scarce in the original center of infestation at Delaware.

COMMON RED SPIDER (Tetranychus telarius L.)

Washington

M. A. Yothers (July 17): This mite, which ascended the fruit tree trunks in early April, has now become extremely abundant and injurious, particularly to the fruit and foliage of Delicious apple trees in many orchards in this section.

PEACH

PEACH BORER (Aegeria exitiosa Say)

South Carolina A. Lutken (July 25): The peach borer is moderately abundant in the Piedmont area. Severe damage to untreated trees.

Georgia

O. I. Snapp (July 14): The first pupation of the season in the field was recorded today. Many larvae are now full grown. The infestation is rather heavy in orchards in Fort Valley, which are neither treated with paradichlorobenzene nor wormed.

PLUM CURCULIO (Conotrachelus nenuphar Host.)

New York

N. Y. State Coll. of Agr., Weekly News Letter (July): Up to July 10 a few adult plum curculios were still to be observed laying eggs in the lower Hudson River Valley. In the western part of the State injury has been reported to as high as 20 per cent of the Rhode Island Greening apples and there has been very serious injury to prunes in most blocks. Peaches are also suffering some injury. (Abstract, J.A.H.)

New Jersey

N. J. State Coll. of Agr., Weekly News Letter (July): Peach growers in Monmouth County are reporting trouble with the curculio. It is reported from Cumberland County as doing considerable harm. Curculio injury is reported from Mercer County as being slight.

Delaware

L. A. Stearns (July 22): First-brood adults of the plum curculio have been emerging since early in July. Very abundant in Sussex County.

Georgia

O. I. Snapp (July 10): Eggs of the second generation began to hatch in the insectary on July 5. The infestation is unusually light, and to date the insect has caused practically no damage to the peach crop. (July 20): 51,721 peach drops were cut open and examined during May and June and of these only 670, or 1.3 per cent, were found to be infested with curculio larvae. The infestation continues to be the lightest in 13 years. Elbertas are beginning to ripen. All other varieties have moved with no damage from curculio in Fort Valley.

Florida

E. W. Berger and G. B. Merrill (July 23): The plum curculio is very abundant on late peaches at Gainesville.

Illinois

W. P. Flint (July 20): Plum curculio adults are, according to Mr. Chandler, beginning to emerge in southern Illinois. The insect is much less abundant than usual in the southern and central parts of the State.

Minnesota

A. G. Ruggles and assistants (July): The plum curculio has not been reported as seriously abundant from any part of the State during the month. (Abstract, J.A.H.)

Tennessee

H. G. Butler (July 29): Second-brood eggs were deposited at the insectary July 13th and on July 27th the first mature larvae of this brood left the fruit. With the beginning of the peach harvest less than two weeks away the curculio fruit infestation is still so low as to be negligible in this area.

Mississippi

J. M. Langston and assistants (July): The plur curculio as a whole is not unusually abundant, only two counties reporting large numbers. (Abstract, J.A.H.)

Connecticut

P. Garman (July 23): The first brood is extremely light; the second brood is unusually heavy in practically all orchards. Parasitism by Trichogramma is moderate to light, 20 to 80 per cent. Parasitism by Macrocentrus and other species is light.

New York

N. Y. State Coll. of Agr., Weekly News Letter (July): Although oriental fruit moth larvae were about half grown by the middle of the month their damage was for the most part to terminal growth only. However, the first larva to be found in a peach in this part of the State was observed July 13. In the western part of the State the damage seems to be more widespread in general than last year. Abstract, J. A. H.)

New Jersey

N. J. State Coll. of Agr., Weekly News Letter (July): Peach growers are reporting trouble with the oriental fruit moth in Monmouth County.

South Carolins

A. Lutken (July 25): The oriental fruit moth is moderately abundant in the Piedmont area. There is a slight increase.

Georgia

O. I. Snapp (July 20): The broods are now overlapping. Twig injury has practically stopped, but an occasional larva is being found in ripe fruit in Fort Valley. The infestation continues very light.

C. H. Alden (July 20): The oriental fruit moth is scarce at Cornelius. There is very little twig or fruit injury, much less than in 1930.

Illinois

W. P. Flint (July 20): The oriental fruit moth continues to be quite scarce in all but the extreme southern part of the State. In the southern part of the State it is only moderately abundant and there is very little injury to fruit as yet.

Tennessee

H. G. Butler (July 29): Trap records during the present season have consistently indicated a smaller moth population this year than last. The percentage of parasitism noted in field-collected larvae maturing in July is considerably higher than that of the June collection. Most of the parasites so far obtained are Macrocentrus delicatus Cress.

Mississippi

J. M. Langston (July 23): Peach trees injured by larvae of the oriental fruit moth were received from Sallis on June 26, from Wesson on July 10, and from Jackson on July 10.

Ohio

J. T. Houser (July 10): The oriental fruit moth is very abundant. Serious losses are in prospect.

PEACH TWIG BORER (Anarsia lineatella Zell.)

California

S. Lockwood (July 27): The peach twig borer has been more abundant than ordinarily experienced in the Sacramento Valley counties where canning and fresh peaches are raised extensively. Abandoned or neglected orchards have been largely responsible for this increased population.

SHOT-HOLE BORER (Scolytus rugulosus Ratz.)

Ohio

T. H. Parks (July 21): We are receiving complaints about this insect and frequently visit orchards where trees are dying from its attack. It is apparent that the injury is aggravated because of the drought of 1930.

GREEN STINK BUG (Acrosternum hilaris Say)

New York

N. Y. State Coll. of Agr., Weekly News Letter (July 20): Among the unusual pests which have caused a commotion among a few growers has been the green soldier bug on peaches in eastern New York.

APLANT BUG (Lopidea robiniae Uh.)

Kentucky

W. A. Price (July 24): This species was reported to be common and feeding on peaches at Guston.

PEAR

PEAR PSYLLA (Psyllia pyricola Foerst.)

Connecticut

P. Garman (July 23): The pear psylla is abundant in practically all pear orchards.

New York

N. Y. State Coll. of Agr., Weekly News Letter (July): Early in the month the pear psylla became a serious problem in the lower Hudson River Valley. In the western part of the State the insect is also extremely numerous. During the second week of July practically all commercial growers were spraying in this part of the State for the control of this pest. (Abstract, J.A.H.)

PEAR LEAF BLISTER MITE (Eriophyes pyri Pgst.)

Illinois

W. P. Flint (July 20): Leaves infested with this insect have been sent in by a number of persons. Apparently the mite is more abundant than usual although no serious commercial damage is caused by it.

PEAR MIDGE (Contarinia pyrivora Riley)

New York

N. Y. State Coll. of Agr., Weekly News Letter (June): A real infestation of the pear midge was found June 22 in a pear orchard, mostly on Clapps in eastern New York. The same pest was observed in another orchard June 11 at Clintondale.

CHERRY

DARK CHERRY FRUIT FLY (Rhagoletis frusta O.S.)

Michigan

R. H. Pettit (July 1): The service by means of which date's for spraying to control the two species of cherry maggots are advised is progressing very nicely. Yesterday, on the 29th, the black-bodied fruit fly emerged in our cages at Northport, in Leelanau County. Farther south emergences have been occurring for some time and much spraying has been done.

CHERRY FRUIT FLY (Rhagoletis cingulata Loew)

Oregon

D. C. Mote (July 13): S. C. Jones reports that the cherry fruit fly reached the peak of emergence in June. A few flies are still emerging. First eggs hatched in the laboratory on June 21. Maggots are being found in large numbers in the field. First maggots were found in the field June 27; both visible and half grown maggots at Springfield on that date.

PLUM

THISTLE APHID (Anuraphis cardui L.)

Idaho

C. Wakeland (June 30): Prune trees throughout the southwestern Idaho have been heavily infested with the thistle aphid, which has caused much early spring spraying.

RASPBERRY

RED SPIDER (Tetranychus telarius L.)

New York

N. Y. State Coll. of Agr., Weekly News Letter (July 20): The red spider situation in Brant and North Colling has developed to a very acute stage, counts made showing anywhere from 300 to 400 red spiders per leaf on red raspberries. Quite a few of the leaves have already turned brown and died.

RASPBERRY CANE BORER (Oberea bimaculata Oliv.)

Michigan

R. H. Pettit (July 20): It will interest you to know that for two or three years back this species has been becoming more and more numerous in Michigan, until now it is more plentiful than I have ever thought to see it. It works, of course, on red raspberries and on roses.

GRAPE

SIX-SPOTTED GRAPE BEETLE (*Pelidnota punctata* L.)

Connecticut W. E. Britton (July 23): 61 beetles were collected in one city garden within a week in New Haven

GRAPE COLASPIS (*Golasois brunnea* Fab.)

Indiana J. J. Davis (July 25): The grape colaspis was very destructive to grape and also ate pussy willow at Salem July 1, to beans at Aurora July 6, and to beans, grapes, and rhubarb at Paoli July 10.

GRAPE LEAF SKELETONIZER (*Harrisina brillians* B & McD.)

Arizona C. D. Lebert (July 28): Quite numerous in spots throughout the valley with severe foliage injury at several places.

GRAPE LEAFHOPPER (*Erythroneura comes* Say)

New Jersey N. J. State Coll. of Agr., Weekly News Letter (July): The nymphs of the grape leafhopper are now very abundant in many vineyards. Leafhoppers have done serious damage to many of the vineyards in Monmouth County. In fact we saw one vineyard yesterday which was completely defoliated. However, this is not a picture of the conditions in the county as a whole, since there are other vineyards that are in fine condition.

Delaware L. A. Stearns (July 22): The second-brood eggs of the grape leafhopper are now hatching.

North Carolina Z. P. Metcalf (July 21): The grape leafhopper is very abundant.

Ohio G. A. Runner (June 25): The grape leafhopper is abundant in all grape districts along the south shore of Lake Erie. In some localities considerable damage was done to older grape leaves by adults of the overwintering brood. Nymphs of the first and second instars are present in large numbers on the mainland and adjacent islands. About 85 per cent of the adults of the overwintering brood now present are females.

Arizona C. D. Lebert (July 28): Quite abundant on grapes in the Phoenix area. Very severe leaf injury at several places.

California S. Lockwood (July 27): The grape leafhopper has not been responsible for as much damage in Kern County as in other counties in the San Joaquin Valley. Fresno, Madera, and parts of other northern counties of this valley have suffered extremely. The tonnage of marketable grapes will be reduced by a rather large percentage due to this insect and the hot, dry weather experienced this summer.

CURRENT

CURRENT BORER (Synanthedon tipuliformis L.)

North Dakota J. A. Munro (July 18): Adults of the currant borer were first noticed in the vicinity of Fargo June 24. Many of the currant bushes had been badly injured by the pest.

IMPORTED CURRENT WORM (Pteronidea ribesi Scop.)

New York N. Y. State Coll. of Agr., Weekly News Letter (July): The imported currant worm broke out in a currant patch in Marlboro, Ulster County, and about consumed the foliage.

CURRENT APHID (Cryptomyzus ribis L.)

Connecticut N. Turner (July 1): Considerable damage was done to a small plot of currants in Ridgefield. Coccinellid larvae are abundant.

BLUEBERRY

CRANBERRY ROOT WORM (Rhadopterus picipes Oliv.)

Florida J. R. Watson (July 24): Blueberries were attacked by the flea beetle near Palatka.

GOOSEBERRY FRUIT WORM (Zophodia grossulariae Riley)

Mississippi H. Gladney (July 17): The gooseberry fruit worm was doing noticeable damage to blueberries in the field near Ocean Springs on June 29.

PECAN

FALL WEBWORM (Hyphantria cunea Drury)

Mississippi J. M. Langston and assistants (July): The first colony of the fall webworm was noticed at Greenville July 2, on pecan. Since that date scattered colonies have been noticed. As yet there is no apparent general infestation. The fall webworm is scarce over six north-east counties.

North Carolina. W. A. Thomas (July 18): It was observed today that these insects were just beginning to show up with their unsightly webs in the pecan trees of Chadbourn.

PECAN NUT CASE BEARER (Acrobasis caryaee Grote)

Florida

J. R. Watson (July 24): The nut case bearer of pecans has been unusually bad, particularly in the northeastern part of the State. On trees which set a light crop the nut case bearer has in some instance taken nearly all of them.

E. W. Berger and G. B. Merrill (June 26): The pecan nut case bearer is very abundant in Gainesville and Hawthorn.

PECAN CASE BEARER (Acrobasis juglandis LeB.)

Georgia

J. B. Gill (July 26): The larvae are now feeding on the lower surface of the pecan leaflets, and indications point to a moderate infestation in the pecan orchards in the southern portion of the State.

Florida

J. R. Watson (July 24): The leaf case bearer in the Monticello section is unusually scarce for this season of the year. (F.W.Walker)

Mississippi

J. P. Kislanko (July 20): The pecan leaf case bearer is moderately abundant. On July 8 many larvae of the summer generation were observed. At the same time there were many larvae and pupae of the preceding generation, in Stone County.

HICKORY SHUCK WORM (Laspeyresia caryana Fitch)

Mississippi

J. M. Langston (July 23): A rather heavy infestation was reported by a pecan grower at Ocean Springs, on July 6.

WALNUT CATERPILLAR (Datana integerrima G. & R.)

Mississippi

E. Gladney (July 19): The walnut caterpillar is moderately abundant on pecans at Ocean Springs.

J. P. Kislanko (July 20): The first colony of the walnut caterpillar this year was observed on July 16. The colony was very small, six larvae. Several adults have been caught by the light.

PECAN CATOCALA (Catocala viduata Guen.)

North Carolina

Z. P. Metcalf (July 21): The pecan catocala is very destructive in Onslow County.

Mississippi

J. M. Langston (July 23): The pecan catocala attracted more attention this year in various sections of the State than for several years. Recently specimens have been received from Jasper, Scott, and Coahoma Counties.

PECAN APHIDS (Aphiidae)

Mississippi

J. P. Kislanko (July 20): Up to this time pecan aphids are moderately abundant. Monellia costalis Fab. is more abundant than Myzocallis fumipenellus Fitch, which is now appearing with some foliage injury on the Schley and Pabst varieties.

Georgia

J. B. Gill (July 26): The black pecan aphid, (M. fumipenellus Fitch) is moderately abundant on pecan trees in southern Georgia. As a whole aphid injury in pecan orchards has been very much reduced from former years. However, at this time there is a slight increase in the black pecan aphid and before the close of the season this species may cause some serious defoliation in some orchards in the southern part of Georgia.

CITRUS

CITRUS WHITEFLY (Dialeurodes citri Ashm.)

Louisiana

W. E. Hinds (July 25): The citrus whitefly is very abundant on citrus, privet, etc.

CITRUS BLACKFLY (Aleurocanthus woglumi Ashby)

Cuba

Monthly Letter, Bureau of Entomology, U. S. Dept. of Agr. (June): C. P. Clausen, who left Washington last November for the Far East to continue his search for parasites of the citrus black fly, arrived in Havana, Cuba, on June 3 with a shipment of parasites, which will be liberated there. On May 31 Mr. Clausen inspected the infestations in Panama, where colonies of one of the parasites, Eretmocerus serius Silv., had been liberated in January, and reports that whereas at the time of liberation the trees were heavily infested, now citrus is almost entirely free from the black fly.

SCALE INSECTS (Coccidae)

Florida

J. R. Watson (July 24): The dry weather has also prevented the development of the entomogenous fungi, so that scale insects, including the purple scale and the Florida red scale, and also the whitely, are more abundant than usual at this season.

E. W. Berger and G. B. Merrill (July 23): The purple scale, Lepidosaphes beckii Newn., is very abundant in some groves at McIntosh and Micanopy.

Arizona

C. D. Lebert (July 28): The cottony cushion scale, Icerya purchasi Mask, in this valley is practically reduced at the present time. Every known infestation has been supplied with the predatory lady beetle, Rodolia cardinalis Muls., and the majority of infestations have been cleaned out.

CITRUS MEALYBUG (Psuedococeus citri Risso)

Florida

J. R. Watson (July 24): Mealybugs have been very abundant in groves. The experiment station has been liberating several thousand Cryptolaemus montrouzieri Muls. These are multiplying rapidly and in groves where they were first introduced mealybugs are becoming scarce.

CITRUS RUST MITE (Phyllocoptes oleivorus Ashm.)

Florida

J. R. Watson (July 24): Another insect which has been favored by the dry weather is the rust mite, whose attacks are extending much later in the season than normally.

E. W. Berger and G. B. Merrill (July 23): The citrus rust mite is very abundant in some groves at McIntosh and Micanopy.

AN ANT (Pheidole sp. (probably P. desertorum)
var. Maricopa Whl.)

Arizona

C. D. Lebert (July 28): Severe injury by girdling young citrus trees near Mesa, about 60 per cent of the young trees became infected with gummosis from having the bud union covered. The ants seem to be attracted to gum pockets and have in nearly every case at least partially girdled the tree by removing the bark around the bud union and below.

T R U C K - C R O P I N S E C T S .

BLISTER BEETLES (Meloidae)

Indiana J. J. Davis (July 25): Blister beetles were the subject of frequent inquiry during the past month, having been reported from a great variety of crops and from practically all parts of the State.

North Dakota J. A. Munro (July 18): Blister beetles (Cantharis nuttalli Say) have been very abundant this season. They are reported from McKenzie, Golden Valley, Adams, Ramsey, LaMoure, Williams, Kidder, Burke, Burleigh, Grand Forks, Pembina, Towner, Morton, and Walsh Counties. Reports indicate that they have caused injury chiefly to caragana, alfalfa fields, and garden stuff.

South Dakota H. C. Severin (July 14): Blister beetles of many species are doing much harm to crops and trees in South Dakota. Cottonwood, spruce, caragana, legume crops, potato, and garden truck are badly damaged in many sections.

Nebraska M. H. Swenk (July 1 - 15): Blister beetles continue to be reported, not only from eastern Nebraska but during the period here covered also from southwestern Nebraska, from Kearney, Gosper, Lincoln, and Keith Counties southward. In eastern Nebraska the species concerned has in all cases been Epicauta lemniscata Fab.; while in southwestern Nebraska Macrobasis im- maculata Say, M. segmentata Say, and M. unicolor Kby. have been the species concerned. The damage was chiefly to potatoes, but beets, beans, and lettuce, and other garden truck (except onions) were commonly attacked also.

Kansas H. R. Bryson (July 23): Blister beetles are reported as abundant in several localities. This injury is not confined to the western counties since numerous complaints have come from eastern counties in the vicinity of Wellsville and Columbus.

Alabama J. M. Robinson (July 23): Blister beetles (Epicauta sp.) are very abundant on mangels at Auburn. Macrobasis unicolor Kby. destroyed 4 acres of soy beans at Tuscaloosa. Blister beetles, Epicauta cinerea Forst., are very abundant, having destroyed 2 acres of soy beans at Hamilton.

Louisiana W. A. Douglas (June 26): The first blister beetles, Epicauta lemniscata Fab., found this year at Crowley on Otootan soy beans, June 23.

SAY'S BLISTER BEETLE (Pomphorhoea sayi Lec.)

New Hampshire L. C. Glover (July 1): There have been several reports of Say's blister beetle this month. It seems to be quite abundant in certain localities on the western side of the State.

Connecticut E. P. Felt (July 21): Say's blister beetle appeared in very large numbers at Danbury.

New York C. R. Crosby (June 26): Many specimens were received from New Bremen. They were very numerous on beans.

Wisconsin E. L. Chambers (July 21): Corn in LaCrosse County was reported injured in one spot by large numbers of these giant bluish-black blister beetles. More than 50 specimens were collected by the farmers without difficulty in a small area, they were so abundant.

GARDEN WEBWORM (Loxostege similalis Guen.)

North Dakota J. A. Munro and assistants (July): Garden webworms have been very abundant in the southern part of Steele County. (July 3): The garden and sugar beet webworms are unusually abundant and causing much damage.

Nebraska M. H. Swenk (July 1): During the last week in June, in Johnson and northern Gage Counties, there was a severe local outbreak of the garden webworm in the cornfields, some of which were badly damaged.

Kansas H. R. Bryson (July 23): The garden webworm has been very abundant during the past month and has caused considerable injury to alfalfa, soybeans, corn, and garden crops.

FALSE CHINCH BUG (Nysius ericae Schill.)

South Carolina J. N. Tenhet (July 15): Several patches of early cowpeas in this vicinity are being seriously damaged by the false chinch bug.

Iowa C. N. Ainslie (July 7): The false chinch bug is very numerous over a large area this summer, and swarms of the bugs are discovered when their shelter is removed. Actual damage is not easy to estimate, for its food plants are various, but it has frequently been mistaken by farmers for the true chinch bug.

Nebraska M. H. Swenk (July 1 - 15): In the southwest, especially Douglas, Dundy, Redwillow, and Frontier Counties, the false chinch bug has been very numerous on garden truck of all kinds, but tending to concentrate largely on the beets.

Texas

O. G. Babcock (July 7): For the past few days the false chinch bug has been appearing in myriads and is just beginning to reach the winged stage. No damage is reported.

F. L. Thomas (July 22): The false chinch bug has been the cause of considerable complaint. It has caused injury to cotton, cowpeas, oats, and hegari in Madison, Burleson, Milam, and Erath Counties.

Colorado

C. P. Gillette (July 22): The false chinch bug is moderately abundant in the eastern part of the State in the plains area.

VEGETABLE WEEVIL (Listroderes obliquus Gyll.)

Alabama

J. M. Robinson (July 23): The vegetable weevil is moderately abundant in Abbeville, the farthest point east in Alabama.

POTATO

COLORADO POTATO BEETLE (Leptinotarsa decemlineata Say)

New York

N. Y. State Coll. of Agr., Weekly News Letter (July): Potato beetles appeared to be more abundant than they have been for the past two seasons in western New York.

New Jersey

N. J. State Coll. Agr., Weekly News Letter (July 7): Potato bugs are worse on tomatoes than usual.

Pennsylvania

J. N. Knull (July 9): The Colorado potato beetle has been abundant in small gardens in the vicinity of Mont Alto.

C. A. Thomas (July 23): Potato beetles have been abundant and destructive on unsprayed potatoes in Chester County this month.

Maryland

E. N. Cory (July 21): The Colorado potato beetle is very abundant

Ohio

J. T. Houser (July 10): The Colorado potato beetle is moderately abundant - more plentiful generally than in 1930.

Indiana

J. J. Davis (July 25): The potato beetle was abundant on potato at Hartford City and Warsaw the last of June. The potato beetle killer Perillus bioculatus Fab. was observed commonly attacking potato beetle larvae at Logansport (June 25) and Elkhart (July 15).

Minnesota A. G. Ruggles and assistants (July): The Colorado potato beetle is quite generally abundant throughout the State, reports of heavy infestations coming from practically all sections. (Abstract, J.A.H.)

North Dakota J. A. Munro (July 18): The Colorado potato beetle is more abundant this season than usual. It is reported from 15 counties.

Oklahoma C. E. Sanborn and assistants (July 22): The Colorado potato beetle is very abundant -- worse than for a number of years.

Mississippi J. Milton (July 21): The Colorado potato beetle has been very abundant on potatoes and tomatoes for the last several weeks in Alcorn County.

Montana R. W. Gjullin (June 30): The Colorado potato beetle is very abundant in Park County.

Colorado C. P. Gillette (July 22): The Colorado potato beetle is moderately abundant in the northern part of the State.

Idaho C. Wakeland (July 23): The potato beetle is generally distributed in several localities in southwestern Idaho and in the entire potato-growing part of northern Idaho. The insect appears to be only partially two-brooded in southern Idaho.

Utah G. F. Knowlton (July 17): Mr. LeRoy Marsh discovered an infestation on one city lot and a part of another lot in Ogden about June 20. Effort has been made to eradicate this pest in this area. (July 25): It is apparently almost eliminated now at Ogden.

POTATO FLEA BEETLE (Epitrix cucumeris Harr.)

New York N. Y. State Coll. of Agr., Weekly News Letter (July): This beetle seems to be quite generally prevalent and unusually injurious in western New York this year. The injury lasted into early July.

Indiana J. J. Davis (July 25): Potato flea beetles were reported abundant on potato at Thorntown previous to July 11.

North Dakota J. A. Munro (July 18): Potato flea beetles are moderately abundant in LaMoure and Cass Counties.

South Dakota H. C. Severin (July 14): Flea beetles of several species are attacking garden crops such as potato, tomato, cabbage, turnips, radishes, beets, etc.

Nebraska M. H. Swenk (July 1 - 15): In Dodge County potato fields were being injured rather severely during the second week in July.

Colorado C. P. Gillette (July 22): The potato flea-beetle is very abundant in the Greeley area but not in other sections.

Connecticut D. Lacroix (July 22): A heavy infestation of this plant louse was found on about 5 acres of potatoes in Tariffville. An examination of the field showed a severe yellowing of some old growth and curling of new leaves.

New Jersey Weekly News Letter, N. J. State Coll. Agr. (July 7): Lice on tomatoes are causing some damage in Burlington County.

Ohio N. F. Howard (July 11): At Cincinnati potato aphids were becoming abundant on early potatoes and tomatoes.

Ohio T. H. Parks (July 21): Early planted potatoes have become seriously infested since the middle of June. Hopperburn has put in its appearance and this disease coupled with dry weather has seriously affected the prospects for a high potato yield. Bordeaux-sprayed fields are holding up well and showing little injury. Bean plantings on the University farm show serious injury from this leafhopper. The plants are stunted and the leaves distorted as a result of its feeding.

Indiana J. J. Davis (June 29): The potato leafhopper was abundant on potato at Thorntown.

Illinois C. C. Compton (July 20): The potato leafhopper is inflicting the usual severe injury to potatoes and beans in Cook County.

Kentucky W. A. Price (July 24): The potato leafhopper is very abundant.

Minnesota A. G. Ruggles and assistants (July): The potato leafhopper is quite generally reported from all parts of the State as below normal in abundance, but four counties (Aitkin, Benton, Lake, and Blue Earth) reported it as abundant enough to attract attention. (Abstract, J.A.H.)

Iowa H. E. Jaques (July 24): The potato leafhopper is very abundant in 14 counties scattered throughout the State.

TARNISHED PLANT BUG (Lygus pratensis L.)

New York N. Y. State Coll. of Agr., Weekly News Letter, (July): The tarnished plant bug is unusually prevalent in potato fields in

western New York, the damage having been particularly noticeable during the second week in July.

Nebraska

M. H. Swenk (July 1): In Hall and Buffalo Counties the tarnished plant bug was reported as very plentiful on potato plants, and doing damage June 18 to 22.

Idaho

C. Wakeland (June 30): Injury from the tarnished plant bug is more prevalent in potato vines than we have ever noticed it before. Injury takes the form of wilted terminals and blossoms which later turn black.

POTATO TUBER WORM (Phthorimaea operculella Zell.)

Florida

J. R. Watson (July 24): This insect was sent in from Fort Myers, where it was doing considerable damage to potatoes in storage.

E. W. Berger and G. B. Merrill (July 23): The potato tuber moth is very abundant on potatoes in storage at Kissimee and Lake Worth.

TOMATO WORM (Protoparce sexta Johan.)

New Jersey

N. J. State Coll. Agr., Weekly News Letter (July): Green tomatoe worm outbreaks are being reported from Cumberland and Camden Counties.

Maryland

E. N. Cory and assistants (July 17): The tomato hornworm has been extremely injurious in Anne Arundel, Baltimore, Caroline, Kent, and Dorchester Counties. One field of 75 acres in Caroline County had as high as 15 worms per plant and a large portion of the early fruit was destroyed. One field in Dorchester County had four acres of early tomatoes so heavily infested that they had to be ploughed down.

Indiana

J. J. Davis (July 25): Tomato worms reported very destructive to tomatoes throughout the State.

TOMATO STILT BUG (Jalysus spinosus Say)

North Carolina

L. B. Reed (July 16): The tomato stilt bug was found on this date causing serious damage to tomatoes in one garden. Almost the entire crop was being destroyed.

TOMATO PSYLLID (Paratrioza cockerelli Sulz.)

Colorado

C. P. Gillette (July 22): The tomato psyllid is moderately abundant in the Greeley area, causing considerable damage to potatoes in some fields.

BEANS

MEXICAN BEAN BEETLE (Epilachna corrupta Muls.)

Massachusetts A. I. Bourne (July 25): The Mexican bean beetle is spreading over a larger area than at this time in 1930.

Rhode Island A. E. Stene (July 29): Mexican bean beetles have been reported on good authority from several sections of the State. Larvae have been sent in from Washington County but so far no adults have been captured.

Connecticut E. E. Tucker (July 9): The Mexican bean beetle was first reported attacking shell beans at Vernon. Damage is slight to date.
R. E. Wing (July 21): The Mexican bean beetle was found on string beans on two places at Woodstock and Putnam, within the week.

N. Turner (July 21): The first generation caused serious damage to beans in the southern half of the State. Adults started flying July 10, and no second-generation eggs have been found to date. Adults emerged about a week later in the northern part of the State. First-generation injury was spotted but in general quite severe. Several growers lost their early beans entirely. The more severe damage is occurring from 100 to 300 feet above sea level.

D. LaCroix (July 21): This is the first infestation of the Mexican bean beetle I have seen in Windsor. It is a small one.

New York N. Y. State Coll. Agr., Weekly News Letter (July 8): For the first time, I believe, the Mexican bean beetle has been found in Esopus and Port Ewen. This pest was found in the larval and pupal stages.

New Jersey A. N. Caudell (July 13): I saw a bean patch of an acre or so completely destroyed by the Mexican bean beetle. All are gone from the field except a few pupae.

N. J. State Coll. Agr., Weekly News Letter (July 14): The Mexican bean beetle is still very prevalent throughout Morris County. There are very few fields of beans that have not been attacked by it. (July 21): From Hunterdon County many requests are being received concerning the control of the Mexican bean beetle.

Pennsylvania T. L. Guyton (July 27): The Mexican bean beetle is scarce in the eastern part of the State.

Delaware L. A. Stearns (July 22): The second brood of the Mexican bean beetle is generally severe throughout the State.

Maryland E. N. Cory and assistants (July 17): The Mexican bean beetle is on the increase, first adults of the second generation occurring.

Ohio J. T. Houser (July 10): The Mexican bean beetle is moderately abundant, and is much more plentiful than in 1930.

Indiana J. J. Davis (July 25): The Mexican bean beetle has been reported frequently from June 17 to date as follows: Bedford, Mitchell, Salem, Cloverdale, Greencastle, Bloomington, Danville, Terre Haute, Bridgeton, Rockville, and Anderson. The county agent of Monroe County reports that during June he received over 125 telephone calls about insects and over half were regarding the Mexican bean beetle.

Colorado C. P. Gillette (July 22): The Mexican bean beetle is very abundant on the eastern and western slopes.

BEAN APHID (Aphis rumicis L.)

Connecticut N. Turner (July 1): Moderately heavy infestation on bush and pole limas. Some growers have had no trouble from this aphid for several years.

LIMA BEAN VINE BORER (Monoptilotia pergratialis Hulst.)

North Carolina W. A. Thomas (July 18): This insect is much more numerous in the vicinity of Chadbourne than it has been in the past eight years. Growers of home gardens complained of the injury of this insect.

BEAN THIRIPS (Heliothrips fasciatus Perse.)

Mississippi J. M. Langston and assistants (July 21): There is a very heavy infestation of thrips, causing blooms of pole beans, bunch beans, and butter beans to fall. Practically no fruit is setting. Complaints have come in from several places in Union, Lee, Itawamba, and Pontotoc Counties.

California S. Lockwood (July 27): On the 15th day of July there was discovered an insipient infestation of bean thrips on about 20,000 acres of cotton in the Dos Palos -- Los Banos area of the San Joaquin Valley in California. At that time adult thrips averaged over this area about one thripsto the plant and at this time the larvae were found numerous only in rather small areas of this region. No commercial damage had occurred, though there is promise of considerable to come.

PEAS

PEA APHID (Illinoia pisi Kalt.)

New York

Weekly News Letter, State Coll. of Agr., (July): The pea aphid is causing considerable damage to the pea crops in the Collins and Springville sections.

Michigan

R. H. Pettit (July 10): Practically the entire canning pea crop in the eastern part of Michigan has been ruined by the pea aphid. The attack developed suddenly as usual, and was not noticed by the growers until too late to do any effective work.

*

GREEN CLOVER WORM (Plathypena scabra Fab.)

Nebraska

M. H. Swenk (July 1): Garden peas were seriously damaged in several localities during the last week in June by the green clover worm, which seems to be present in unusual numbers this year.

CABBAGE

CABBAGE WORMS (Pieris rapae L.)

New Jersey

Weekly News Letter, State Coll. of Agr., (July 14): Considerable trouble with cabbage worms was reported from Mercer County.

Ohio

T. H. Parks (July 21): The imported cabbage worm is very abundant.

Illinois

C. C. Compton (July 15): The imported cabbage worm is unusually abundant for this season of the year at Des Plaines. Pupation of the first brood is well along and the percentage of parasitism is low.

Kentucky

W. J. Price (July 24): The imported cabbage worm is moderately abundant.

Minnesota

A. G. Ruggles (July): The imported cabbage worm is very abundant and doing more damage than usual in several points in Winona, Lac Qui Parle, Lyon, Houston, and Martin Counties. (Abstract, J.A.H.)

Kansas

H. R. Bryson (July 23): The imported cabbage worm is very abundant.

North Dakota

J. A. Munro and assistants (July): The imported cabbage worm is moderately abundant in Barnes, Williams, and Ramsey Counties and is scarce in Golden Valley, the moths just showing up. Apparently it is not causing a great amount of injury in any of these counties. (Abstract, J.A.H.)

Iowa

H. E. Jaques (July 24): The imported cabbage worm is reported as very abundant in 24 counties scattered over the State.

Nebraska

M. H. Swenk (July 20): The imported cabbage worm is very abundant -- more troublesome than usual.

CABBAGE LOOPER (Autographa brassicae Riley)

Illinois

C. C. Compton (July 15): During the past week egg deposition has been heavy at Des Plaines. Many fields show from 4 to 10 eggs per plant over the entire field.

North Dakota

J. A. Munro (July 18): The cabbage looper was noticed on cabbage in the vicinity of Fargo.

DIAMOND-BACK MOTH (Plutella maculipennis Curt.)

Connecticut

A. E. Wilkinson (July 20): Reported attacking cabbage and cauliflower at Westport, Fairfield, Easton, Trumbull, Danbury, Bridgeport, Brookfield, Thomaston, Morris, New Milford, Salisbury, Norfolk, Canaan, Vernon, Coventry, Ellington, Enfield, Windsor, Berlin, Rocky Hill, and Newington.

THE HARLEQUIN CABBAGE BUG (Murgantia histrionica Hahn)

Arizona

C. D. Lebert (July 28): Severe damage to cauliflower at Ft. Huachuca, July 14.

CABBAGE MAGGOT (Hylemyia brassicae Bouche)

Montana

R. W. Gjullin (May 30): The cabbage maggot is very abundant in Ravalli County.

Wisconsin

E. L. Chambers (July 21): Cabbage and cauliflower throughout the State suffered severely from maggot attack where control measures were not being attempted.

STRAWBERRY

STRAWBERRY WEEVIL (Anthomomus signatus Say)

New York

N. Y. State Coll. of Agr., Weekly News Letter (July): Several growers are having considerable trouble with strawberry weevils in Erie County.

STRAWBERRY CROWN GIRDLER (Brachyrhinus ovatus Say)

Maine H. B. Peirson (July 22): Strawberry crown girdler adults were observed at Winter Harbor, June 5.

Pennsylvania J. N. Knull (July 12): This weevil is very abundant on the Mont Alto State Forest at the present time. The adults can be found on weeds and low vegetation.

Minnesota A. G. Ruggles and assistants (July): The strawberry root weevil did serious damage during June to large areas of young evergreens at Newport and Owatonna, and during July was reported from Crookston, Virginia, Duluth, and Askov. (Abstract, J.A.H.)

Idaho C. Wakeland (July 23): The strawberry root weevil is generally distributed throughout northern Idaho and causing rather severe injury. Some work is being done in control by the use of poisoned bait.

ROSE LEAF BEETLE (Nodonota puncticollis Say)

New York N. Y. State Coll. of Agr., Weekly News Letter (July): Rose leaf beetles have done considerable damage during the month to fruits of all kinds, including strawberries, in the lower Hudson River Valley. (Abstract, J.A.H.)

STRAWBERRY ROOT WORM (Paria canella Fab.)

North Carolina L. B. Reed (July 23): On this date the species was found causing considerable injury to strawberry foliage in one field.

STRAWBERRY CROWN BORER (Tylodema fragariae Riley)

Connecticut E. E. Tucker (July 1): Plants died when the berries were about half grown. Holes in the crowns of many. The soil looked to have had lots of earthworms present. Damage was 10 to 75 per cent. (Report of C. H. Tryon.)

WHITEFLY (Trialeurodes packardi Morr.)

New York N. Y. State Coll. of Agr., Weekly News Letter (July): A rather unusual condition developed in Ulster and Dutchess Counties early in the month. White flies were very seriously infesting strawberries.

North Carolina L. B. Reed (July 23): The strawberry whitefly infestation has been general in the Chadbourn district during July.

STRAWBERRY LEAF ROLLER (Ancylis comptana Frohl.)

New Jersey

N. J. State Coll. of Agr., Weekly News Letter (July 21): There are still a few reports coming in of the strawberry leaf roller from Cumberland County.

Delaware

L. A. Stearns (July 23): Infestation is severe in many plantings in the vicinity of Bridgeville.

STRAWBERRY CROWN MOTH (Aegeria rutilans Hy. Edw.)

Oregon

D. C. Mote (July 13): K. Gray reports that the peak of emergence has nearly been reached. Eggs were laid June 5 and first eggs hatched June 19. Third-generation parasites of the crown moth are in the larval stage.

STRAWBERRY ROOT APHID (Aphis forbesi Weed.)

North Carolina

L. B. Weed (July 17): The strawberry root louse almost disappeared from the foliage of strawberries during the hot dry days of June but following the rains of July has increased in abundance. The root infestation has been high during the entire period.

CUCUMBERS

PICKLE WORM (Diaphania nitidalis Stoll)

North Carolina

W. A. Thomas (July 17): The first larvae of the season were observed boring into summer squash. Apparently they are about two-thirds grown. A single adult of this species has emerged in the hibernation cage at the laboratory.

Florida

J. R. Watson (July 24): The melon worm and the pickle worm seem to be less abundant than usual at this season of the year in the Gainesville section.

Mississippi

State Plant Board (June 29): Cucumbers are being injured by the pickle worm in several localities. This insect is about two weeks later than usual at the A. & M. College.

J. M. Langston and assistants (July): The pickle worm is reported as doing considerable damage to cucumbers and canteloupes in Stone, Forrest, Marion, and Pearl River Counties. (Abstract, J.A.H.)

STRIPED CUCUMBER BEETLE (Diabrotica vittata Fab.)

Maine

H. B. Peterson (July 22): The striped cucumber beetle first appeared in West Dresden June 13.

Connecticut D. S. Lacroix (June 30): Squash and cucumbers have been rather severely attacked by this insect around Windsor. It is more abundant this June than a year ago.

Pennsylvania H. N. Worthley (July 9): The striped cucumber beetle is moderately abundant at State College. First beetles appeared June 23.

North Carolina W. A. Thomas (July 16): These insects have destroyed the petals of nearly all the flowers on a plot of watermelons near Chadbourne. The leaves, especially near the base of the plants, show evidence of earlier attacks by this insect.

Florida J. R. Watson (July 24): The striped cucumber beetle is very abundant in the Everglades only.

Indiana J. J. Davis (July 25): The striped cucumber beetle has been normally abundant, reports from June 21 to July 16 coming from Indianapolis, Clinton, Bloomington, Geneva, Kokomo, Rensselaer, Knox, Lafayette, Brinfield, Campbellsburg, and Leesburg. At the last three places especial reference was made to damage by the larvae.

Kentucky W. A. Price (July 24): The striped cucumber beetle is very abundant.

Ohio N. F. Howard (June): At Columbus, Marietta, and Gallipolis the striped cucumber beetle has been very numerous and injurious.

Iowa H. E. Jaques (July 24): The striped cucumber beetle is very abundant in 16 counties in various sections of the State.

Nebraska M. H. Swenk (July 20): The striped cucumber beetle is very abundant -- more troublesome than usual.

Kansas H. R. Bryson (July 23): The striped cucumber beetle is very abundant wherever cucumbers, melons, and squashes are grown.

Illinois C. C. Compton (July 20): The striped cucumber beetle has been very destructive to cucumbers, melons, and squash. Melons were still suffering from attack, July 15.

North Dakota J. A. Munro (July 18): The striped cucumber beetle was unusually abundant and injurious during the latter part of June and in early July in Golden Valley, LaMoure, Williams, Kidder, Burke, Burleigh, Grand Forks, Dickey, Barnes, and Cass Counties.

Iowa C. N. Ainslie (July 7): The presence of the cucumber beetle in destructive numbers seems to be universal in this region this year.

Minnesota

A. G. Ruggles and assistants (July): The striped cucumber beetle is unusually abundant and destructive over the southern half of the State, from Chisago, Hennepin, Benton, and Stevens Counties southward. (Abstract, J.A.H.)

Nebraska

M. H. Swenk (July 1 - 15): During the first half of July distinctly more than the usual number of reports of damage by this insect were received.

Oklahoma

C. E. Sanborn and assistants (July 23): The striped cucumber beetle is very abundant.

WESTERN SPOTTED CUCUMBER BEETLE (Diabrotica soror Lec.)

Oregon

D. C. Mote (July 13): T. R. Chamberlin reports that in the laboratory at Forest Grove the first adults of the new generation were obtained on June 8. These came from eggs laid during the last half of March and were reared entirely on wheat seedlings. In the field near Forest Grove adults of the new generation began issuing during the third week of June. The beetles were fairly common by June 23, when they were concentrating on wild cucumber, males outnumbering females 50 to 1. Larvae from eggs laid during the last half of May on overflow land in canary grass and in Polygonum seedlings were from about one-half to full grown on June 24. None had pupated. (July 13): B. G. Thompson reports the summer brood almost all emerged and doing considerable damage to canning beans and other crops. A parasite, Celatoria diabrotica Coq., is beginning to appear in considerable numbers.

MELON APHID (Aphis gossypii Glover)

Virginia

G. E. Gould (July 24): In some fields in the Norfolk area the melon aphid is quite abundant and causing some damage. Severe infestations were noticed on cucumber and canteloupe.

SQUASH BORER (Melittia satyriniformis Hbn.)

Iowa

C. N. Ainslie (July 22): The squash borer is very common this summer. At times several larvae infest a single plant. It has been a number of years since such an outbreak has occurred. The damage has been large.

SPOTTED CUCUMBER BEETLE (Diabrotica duodecimpunctata Fab.)

Pennsylvania

H. M. Worthley (July 9): The beetle made its first appearance on June 23 at State College. It is scarce.

Florida

J. R. Watson (July 24): The beetle is very abundant, especially in the Everglades.

Damage by

Wisconsin

E. L. Chambers (July 21): / this insect has been more severe than usual to corn and beans in Wisconsin this summer. Several large fields of string beans were completely riddled by the pest in Jefferson County.

Oklahoma

C. E. Sanborn and assistants (July 22): The spotted cucumber beetle is very abundant.

Mississippi

J. M. Langston and assistants (July): Moderately abundant during the early part of the month. Later in the month it was reported doing damage to late plantings of truck in Lauderdale County. (Abstract, J.A.H.)

SOUTHERN GREEN STINK BUG (Nezara viridula L.)

South Carolina

J. N. Tenhet (July 16): The southern green stink bug is very abundant this season and is associated with the squash bug on watermelons and cantaloupes.

SQUASH

SQUASH BUG (Anasa tristis DeG.)

Pennsylvania

H. N. Worthley (July 22): The squash bug is very abundant at State College this year. Nymphs from the first to the third instars, eggs, and adults are very plentiful.

Virginia

H. G. Walker (July 24): The first generation is becoming full grown and considerable damage is being done in several fields.

South Carolina

J. N. Tenhet (July 16): The squash bug is unusually abundant on watermelons and cantaloupes. (July 25): O. L. Cartwright reports, July 8, "Squash bugs causing severe damage to cucumbers and watermelons, cucumber patch completely destroyed. Some melon plants dead also. In each case squash planted near by had been killed."

Georgia

O. I. Snapp. (June 25): Squash bugs are unusually abundant and have caused considerable damage to watermelon vines in middle and southern Georgia.

Iowa

C. N. Ainslie (July 22): This pest seems to have multiplied this summer and is ruining gardens and even farm plantings. No control measures seen adequate to prevent serious damage.

~~Arkansas~~

D. Isely (July 23): While the squash bug is moderately abundant each year, its numbers and destructiveness are much greater than usual.

Alabama J. M. Robinson (July 23): The squash bug is very abundant on watermelon vines at Troy, Palos, Auburn, and Clanton.

Mississippi J. M. Langston and assistants (July): Complaints of injury by this insect have been received from various sections of the State throughout the month. Aside from their damage to cucurbits they have been doing damage to ripe plums and tomatoes. (Abstract, J.A.H.)

Idaho C. McLeod (June 30): The squash bug, discovered in Idaho for the first time in 1929, has increased and spread until we are receiving many inquiries from southwestern Idaho concerning control measures.

Utah G. F. Knowlton (July 2): Squash bugs are abundant and doing serious damage in Utah County.

ONIONS

ONION THIRIPS (Thrips tabaci L.)

Colorado C. P. Gillette (July 22): The onion thrips is moderately abundant in the Arkansas Valley.

Indiana J. J. Davis (July 25): Reports received from inspectors indicate 50 per cent damage to the onion crop in northern Indiana by thrips and drought.

ONION MAGGOT (Hylomyia antiqua Meig.)

Minnesota A. G. Ruggles and assistants (July): The onion maggot is very abundant on all onions, cabbage, and radishes. (Abstract, J.A.H.)

SWEETPOTATO

SWEETPOTATO SAWFLY (Sterictiphora collaris Say)

Virginia G. E. Gould and H. G. Walker (July 16): The sweetpotato sawfly is slightly more abundant this year than last in the infestation near Munden in Lower Princess Anne County. Even though larvae were found in several new fields this year, the infestations are very light and little damage is apparent. The adult sawflies and the parasite flies, Schizocerophaga leibyi Towns., are now emerging.

ARGUS TORTOISE BEETLE (Chelymorpha cassidea Fab.)

Mississippi

J. M. Langston (June 16): Inspector R. D. Deen sent us larvae from Shannon with the report that a small area in an acre of sweetpotatoes was stripped of leaves by these insects.

HORSERADISH

DIAMOND*BACK MOTH (Plutella maculipennis Curt.)

New Jersey

N. J. State Coll. of Agr., Weekly News Letter (July 7): The larvae of the diamond-backed moth have become tired of the diet of cabbage and are attacking plantings of horseradish, in Monmouth County.

SPINACH

EGGPLANT LACEBUG (Gargaphia solani Heid.)

Virginia

G. E. Gould (July 24): The eggplant lacebug is causing considerable damage to eggplants in the Norfolk district.

EGGPLANT LEAF MINER (Fthorinaea glochinella Zell.)

Virginia

H. G. Walker and G. E. Gould (July 24): The eggplant leaf miner was observed to be abundant in several fields in the Norfolk district. In one field examined every plant had at least a few larval mines in the leaves; some plants showed severe injury while several others were practically dead.

RED SPIDER (Tetranychus telarius L.)

Virginia

H. G. Walker and G. E. Gould (July 24): Red spiders were found to be very numerous on eggplants in a field near Norfolk. They were causing slight damage.

BEETS

BEET WEBWORM (Loxosteges sticticalis L.)

North Dakota

J. A. Munro (July 18): The beet webworm has been active in nearly all the counties bordering the Red River Valley. Moths from the first brood are appearing. It has been very injurious to beets and also reported as feeding on Russian thistle and a few species of garden plants.

Montana

R. W. Gjullin (June 30): Sugar beet webworms are very abundant. Distribution is general.

Wyoming C. L. Corkins (July 20): The most interesting insect outbreak of the past month has been that of the sugar beet webworm. This insect has been present in outbreak numbers particularly in the north central area of the State. The unusual and, to me, entirely new condition was the migration of the worms into commercial bean fields where serious damage was done. This bean-field infestation seems to be secondary, rather than primary, as we know of no instance where moths laid eggs in the bean fields. Apparently the only danger to beans occurs when fields accidentally lie in the path of migration. Then the beans seem to be a very acceptable food. We shall be interested to know if other entomologists in the sugar-beet webworm area have observed this phenomenon.

BEET LEAFHOPPER (Eutettix tenellus Dak.)

Utah G. F. Knowlton (July 25): The beet leafhopper is moderate to very abundant in the northern part of the State. Some areas have been severely damaged in northern Utah.

Colorado C. F. Gillette (July 22): The beet leafhopper is scarce. There are practically none.

SUGAR BEET ROOT MAGGOT (Tetanops aldrichi Hendel)

Utah G. F. Knowlton (July 10): Tetanops aldrichi Hendel has seriously damaged sugar beets in several fields at Trenton.

TOBACCO

SOD WEBWORMS (Crambidae)

Connecticut D. S. Lacroix (June 27): Larvae of a crambid were very abundant on one tobacco plantation in Windsor. This is the first damage to this crop that I have seen. The same or a closely allied species was found seriously girdling asters in Windsor on the same date. In both cases the land was in hay or wild grasses last year.

CUTWORMS (Noctuidae)

Connecticut D. S. Lacroix (July 20 -- 21): Three serious infestations of these cutworms (probably Agrotis c-nigrum L.) have developed in the last few days. In each case the worms attacked tobacco near fields of timothy which had just been cut, and in every case the timothy was sowed last year. As many as 35 to 50 larvae could be picked up under one tobacco plant. The tobacco infested is broad leaf.

TOBACCO THRIFS (Frankliniella fusca Hinds)

Florida

F. S. Chamberlin (July 2): Dry weather continues to favor thrips increase and severe damage is occurring in cigar wrapper crops.

TOBACCO FLEA BEETLE (Epitrix parvula Fab.)

North Carolina

Z. P. Metcalf (July 21): The tobacco flea beetle is very abundant over the whole State.

Kentucky

W. A. Price (July 24): The tobacco flea beetle is very abundant and doing much damage to tobacco at Ribolt, Flemingsburg, Winchester, Lexington, and Nicholasville.

Oklahoma

C. E. Sanborn and assistants (July 22): The tobacco flea beetle is scarce.

FOREST AND SHADE - TREE INSECTS

SADDLED PROMINENT (Heterocampa guttivitta Walk.)

Massachusetts J. V. Schaffner, Jr. (July 23): Mr. C. E. Hood reports that woodland defoliation by this species is beginning to show up in the Berkshires.

BAGWORM (Thyridopteryx euphemeraeformis Haw.)

Pennsylvania J. N. Knull (July 24): There have been numerous complaints of the bagworm doing damage to evergreens and broadleaf trees in Franklin County.

Maryland E. N. Cory and assistants (July 17): Bagworms are quite generally abundant throughout the State.

L. Bash (July 20): This species is seriously defoliating evergreens on the estate of General Louis Bash in northwestern Washington, D. C.

Vermont G. T. French (July 31): Many people are sending in the bagworm this month. It seems to be unusually common and destructive and is attacking not only evergreens but certain broad-leaved trees and shrubs as well. We have seen one or two pussy willow trees nearly defoliated recently.

Virginia H. G. Walker and G. E. Gould (July 24): Several cases of moderate injury by bagworms on evergreens have been brought to our attention, both in and around Norfolk and on the Eastern Shore.

Ohio E. W. Mendenhall (July 17): The bagworm is quite bad on arborvitae and Norway maples in some localities in Dayton. The trees are stripped of their leaves before the owners notice the damage. Reported from Springfield, Columbus, and Dayton.

North Carolina Z. P. Metcalf (July 21): The bagworm is more abundant and destructive than I have seen it in 20 years.

CECROPIA MOTH (Samia cecropia L.)

North Dakota J. A. Munro (July 18): Cecropia caterpillars are causing injury to trees in Golden Valley and Adams County.

ELM SPANWORM (Ennomos subsignarius Hon.)

Pennsylvania J. N. Knull (June 24): There has been an extremely heavy infestation of this worm in the vicinity of Edgemere. Practically all of the species of forest trees in that vicinity show some feeding. Many of them have been entirely defoliated. About 50 per cent of the moths had emerged on July 4.

ASH

OYSTER-SHELL SCALE (Lepidosaphes ulmi L.)

Pennsylvania J. N. Knull (July 15): A 6-acre plantation of green ash is heavily infested with the oyster-shell scale. Many trees have been killed.

A CHRYSOMELID (Oedionychis sexmaculata Ill.)

Maryland E. N. Cory and assistants (July 17): Quite numerous at College Park; 75 to 100 per cent of the ash leaves on many trees damaged.

CARPENTER WORM (Prionoxystus robiniae Peck)

Ohio E. W. Mendenhall (July 13): One hundred and nineteen ash trees on the Ohio State Fair grounds are badly affected with the carpenter worm and I also find it in other sections of the city.

Nebraska M. H. Swenk (July 1): In the central part of the State quite a bit of trouble with larvae of the carpenter moth boring in ash and poplar trees has been reported.

BEECH

A BEECH SKELETONIZER (Psilocorsis faginella Chamb.)

Maine H. B. Peirson (July 22): The beech leaf skeletonizer was reported at Lucerne, July 3. Moths were flying.

BIRCH

BIRCH SKELETONIZER (Bucculatrix canadensisella Chamb.)

Maine H. B. Peirson (July 22): Moths of the birch leaf skeletonizer were flying on July 3 at Jackman.

BIRCH LEAF MINER (Phyllotoma nemorata Fall.)

New Hampshire Monthly Letter of the Bureau of Entomology, U.S.D.A. (June): A small colony of adults belonging to the genus Tranosema was put out at North Conway, N. H., on June 16. This hymenopterous parasite of Phyllotoma nemorata Fall., a leaf-mining sawfly on birch, was received from Austria during the past winter.

A CASE BEARER (Coleophora salmani Heinr.)

Maine A. E. Brower (July 10): Injury by the recently described Coleophora salmani Heinr. is very severe on young birch and alder in places on Mt. Desert Island, especially along the east coast.

BIRCH LEAF MINER (Fenusia pumila Klug)

Maine H. B. Peirson (July 22): On July 15 this species was not so abundant as last year but can be found everywhere.

Pennsylvania J. N. Knull (June 23): Gray birches through Pike County are heavily infested with this sawfly.

Ohio E. W. Mendenhall (June 17): Some imported birch leaf-miners were found affecting birch leaves in nurseries at Painesville.

BOXELDER

BOXELDER BUG (Leptocoris trivittatus Say)

Indiana J. J. Davis (July 11): Boxelder bugs were annoying in a dwelling and outbuildings at Rensselaer July 11. In the material sent a few were mature but most of them were immature.

North Dakota J. A. Munro (July 18): The boxelder bug is reported as prevalent in boxelder groves in Hettinger, Burleigh and Dickey Counties.

EUROPEAN FRUIT LECANIUM (Lecanium corni Bouche)

South Dakota H. C. Severin (June 26): This species, chiefly on boxelder, is in many sections of the State.

BOXELDER LEAF ROLLER (Gracilaria negundella Chamb.)

Colorado C. P. Gillette (July 22): The leaf roller is very abundant in Weld County, especially about Greeley.

CATALPA

CATALPA SPHINX (Ceratomia catalpae Boisd.)

Maryland E. N. Cory and assistants (July 17): Ceratomia catalpae is generally abundant throughout the State.

Pennsylvania J. N. Knull (July 22): Numerous trees in a plantation have been defoliated by this insect. There is some parasitism.

CYPRESS

CYPRESS BARK SCALE (Ehrhornia cypressi Ehrh.)

Ohio E. W. Mendenhall (July 13): Cypress trees on private property are quite generally infested with the cypress bark scale.

ELM

EUROPEAN ELM SCALE (Gossyparia spuria Mod.)

Maine H. B. Peirson (July 22): The elm bark louse is abundant in the vicinity of Augusta.

Maryland E. N. Cory and assistants (July 17): The European elm scale is reported at Towson.

Ohio E. W. Mendenhall (July 12): The European elm scale is spreading very fast on the American and other elm trees in Grandview and upper Arlington, Columbus, Ohio. The scale is so bad that many of the trees show injury and in some cases the trees are dying on account of this pest. (July 18): I found an outbreak of the European elm scale on American elms near Reynoldsburg, Franklin County. Some of the limbs are dying on account of this scale.

Utah G. F. Knowlton (July 21): The European elm scale has caused considerable damage in northern Utah during the present year.

ELM CASE BEARER (Coleophora limosipennella Dup.)

Pennsylvania J. N. Knull (July 5): Several American elms 2 miles south of Dingman's Ferry, Pike County, are nearly defoliated by this insect.

MOURNING-CLOAK BUTTERFLY (Aglais antiopa L.)

Maine H. B. Peirson (July 22): There was a light infestation of the spiny elm caterpillar in Augusta June 15.

Pennsylvania H. N. Worthley (July 9): Several reports of unusual abundance of the spiny elm caterpillar have been received.

Maryland E. N. Cory and assistants (July 17): This insect is very numerous, attacking many trees in the vicinity of College Park.

Nebraska M. H. Swenk (July 1 - 15): In Keith County, at Ogallala, the leaves of the elm trees were being rather severely eaten during the second week in July by the spiny elm caterpillar.

ELM COCKSCOMB GALL (Colopha ulmicola Fitch)

Maine H. B. Peirson (July 22): The elm cockscomb gall was very abundant for the first time in years, especially near Augusta on July 15.

Pennsylvania E. P. Felt (July 21): The cockscomb elm gall was reported as very badly infesting an elm at Philadelphia.

Nebraska M. H. Swenk (July 1): In Washington County the elms have had more than the usual infestation with the cockscomb elm gall.

ELM LEAF BEETLE (Galerucella xanthomelaena Schr.)

New Hampshire L. C. Glover (July 22): The elm leaf beetle is very abundant in the towns of Exeter, Newfields, Greenland, Stratham, Dover, and Rochester,

Massachusetts and New Hampshire J. V. Schaffner, Jr. (July 21): Various reports of injury to elms by this pest are being received from many localities in eastern Massachusetts and southern New Hampshire. Mr. C. E. Hood has reported the elm leaf beetle as abundant in southeastern New Hampshire and also in towns south of Boston, especially in sections around Dighton.

Connecticut D. S. Lacroix (July 7): Elms along the highway through East Windsor Hill and South Windsor are very badly browned by ~~the~~ attack of this pest. Elms stand out against the foliage of maples as though the former had been singed by fire or were suffering from severe drought. Around Windsor elms are not so badly infested as last year, probably because of spray applications.

W. E. Britton (July 17): Unsprayed trees in East Windsor, South Windsor, Glastonbury, Middletown, Durham, Plainfield, Newtown, and many other places are now brown. I saw no injury at higher elevations in Litchfield, Goshen, Cornwall, and Salisbury a week ago.

New York N. Y. State Coll. of Agr., Weekly News Letter (July 20): The elm leaf beetle is causing severe damage in sections of Catskill village, Greene County. Some elms are almost completely defoliated. (E. G. Drougham)

Delaware L. A. Stearns (July 22): The elm leaf beetle is very active. There is considerable injury on elms along the highway north of Wilmington today.

Maryland E. N. Cory and assistants (July 17): There is a rather general outbreak of this insect in the vicinity of College Park.

Ohio E. W. Mendenhall (July 15): There are some outbreaks of the elm leaf beetle in Dayton.

Kentucky W. A. Price (July 24): The elm leaf beetle has defoliated many trees in Lexington.

FIR

FIR DARK BEETLE (Scolytus ventralis Lec.)

Idaho

J. C. Evenden (July 22): Throughout the range of the grand fir, a very heavy loss is occurring from the attacks of this insect. Many trees of high aesthetic value around summer homes resorts, etc., have been destroyed.

A BUDWORM (undetermined)

Oregon

J. A. Deal (July 13): A budworm was found feeding heavily on the white fir, Douglas fir, and larch in the Wildwood camp ground on the Ochoco National Forest. Supervisor Kuhns on the Whitman reports large areas of dead and dying white fir in the vicinity of Halfway. He says the budworms are killing the fir in this area.

JUNIPER

JUNIPER WEBWORM (Dichomeris marginellus Fab.)

New York

A. N. Caudell (July 16): On July 5 at Mineola, Long Island, found ornamental evergreens with as much as one-half in some cases entirely dead from injury by D. marginellus. The same conditions were noted in the gardens of the Doubleday Doran Company at Garden City.

E. P. Felt (July 21): The juniper webworm was reported as injuring juniper at Rochester.

JUNIPER SCALE (Diaspis carueli Targ.)

Maryland

E. N. Cory and assistants (July 17): The juniper scale is unusually abundant throughout the State.

LARCH

LARCH SAWFLY (Nematus erichsoni Hartig)

Maine

H. D. Peirson (July 22): The larch sawfly was moderately abundant in the northern part of the State, July 15.

Massachusetts Monthly Letter of the Bureau of Entomology, U. S. Dept. of Agr. (June): Two small shipments of adults of Mesoleius tenthredinis Morley were received at the gipsy moth laboratory in June from A. B. Baird, of the Dominion Parasite Laboratory, Belleville, Ontario, Canada. This hymenopterous parasite of the larch sawfly has been introduced from Europe and established in Canada. The adults received at the gipsy moth laboratory have been liberated in larch sawfly infestations in Massachusetts.

Pennsylvania J. W. Knoll (July 16): A large plantation of Japanese larch at Mont Alto is severely defoliated by the larch sawfly. Most of the larvae have spun their cocoons by this date.

LARCH CASE BEARER (Coleophora laricella Hbn.)

Maine H. B. Fairson (July 22): Summer feeding of the larch case bearer following a very severe spring outbreak has been resumed, July 15.

A. E. Brewer (July 10): The larch case bearer is very common. A box of branches brought into the laboratory produced hundreds of moths.

New Hampshire L. C. Glover (July 1): The larch case bearer is very abundant in this State. I have noted its work from Rochester as far north as Littleton.

LOCUST

ASH-GRAY BLISTER BEETLE (Macrobasis unicolor Kby.)

Pennsylvania J. W. Knoll (July 10): Adults appeared in large numbers and did considerable damage to the foliage of black locust seedlings in the Mont Alto nursery.

A LEAF BEETLE (Antipus laticlavia Forst.)

Pennsylvania J. W. Knoll (July 12): The foliage of numerous black locust trees in the vicinity of Pond Bank are badly eaten by the adult of this species.

Nebraska M. H. Swenk (July 1): In Boyd County, during the third week in June, locust trees were more or less defoliated by the leaf beetle A. laticlavia.

MAPLE

APHIDS (Aphidae)

New Jersey N.J. Weekly News Letter, N.J. State Coll. of Agr. (July 7): Aphids are attacking the Norway maples in Monmouth County.

Pennsylvania C. A. Thomas (July 23): The Norway maple aphid (Periphyllus lyropictus Kess.), noted before as so abundant in the southeastern part of the State in June, has become much less abundant during July and many Norway maples are practically clean of them.

Indiana J. J. Davis (July 25): The Norway maple aphid is common on maple at Lafayette June 26.

COTTONY MAPLE SCALE (Pulvinaria vitis L.)

New Jersey N. J. State Coll. Agr., Weekly News Letter (July 7): The cottony maple scale was found on a number of the cutleaf maples in Monmouth County on June 3.

Ohio J. T. Houser (July 10): The cottony maple scale is more abundant than usual.

Indiana J. J. Davis (June 25): The cottony maple scale was reported abundant at Fountain City, Red Key, Michigantown, and Marion, June 23 to July 7. Those from Fountain City were hatching when received June 24.

Wisconsin E. L. Chambers (July 21): The cottony maple scale was found to be doing serious injury to soft maple and box elder trees in all of the cities and villages along the shore of Lake Michigan and throughout the southern half of the State. Many trees were being killed outright and many others seemed doomed by an unusually severe infestation.

North Dakota J. A. Munro (July 18): The cottony maple scale is fairly common at Fargo, Cass County, and a specimen was received from Williston, Williams County.

Idaho C. Wakeland (June 30): Young of the cottony maple scale are just emerging and are very numerous on maples and various other ornamentals in southern Idaho.

MESQUITE

A NOCTUID (Melipotis nigrescens G. & R.)

Texas A. Busck (July 2): Dr. Bilsing reports that on a 125-mile trip between San Angelo and College Station all of the mesquite was completely defoliated by a lepidopterous larva.

OAK

OAK TWIG PRUNER (Hypermallus villosus Fab.)

Connecticut R. B. Friend (July): This insect was reported as very abundant on oaks.

A LEAF MINER (Brachys floricola Kerr.)

Mississippi H. Dietrich (July 20): The leaf-mining larva of this species is very common on the leaves of the turkey oak (Quercus catesbeiae) in George County. The large brown blotch mines are very conspicuous. Although many other species of oak are present the larva has never been found in any of them.

FRUIT TREE LEAF ROLLER (Cacoecia argyrosoma Walk.)

Wisconsin E. L. Chambers (July 21): Practically all of the oak trees in central and northern Wisconsin were defoliated this summer by the fruit tree leaf roller. This is the third year in most localities, and the trees are being seriously weakened because of this pest's attack coupled with two very dry growing seasons.

OAK LACE BUG (Corythucha arcuata Say)

Connecticut E. P. Felt (July 21): The oak lace bug is becoming extremely abundant on white oak leaves in particular, causing a marked discoloration of the foliage which is likely to result in abundant leaf fall.

OAK SCALE (Chionaspis quercus Comst.)

Mississippi J. M. Langston (July 23): Specimens were collected on live oak at Greenwood Island, near Pascagoula, on July 14 by Inspectors R. P. Colmer and H. Berry. This is the first time this species has been recorded from Mississippi.

JUMPING BULLET GALL (Neuroterus saltatorius Hy. Edw.)

Nebraska M. H. Swenk (July 1): In the oak woodlands of eastern Sarpy County there is this year an unusual abundance of the jumping oak gall.

PINE

PINE LEAF MINER (Paralechia pinifoliella Chamb.)

Maine H. B. Pearson (July 22): The pitch pine leaf miner was very abundant in York County June 20.)

SPRUCE CONE WORM (Dioryctria roniculella Grote)

Connecticut E. P. Folt (July 21): A cone moth, probably D. roniculella, and infests many pine cones at both Danbury, Conn., and Stockbridge, Massachusetts Mass., though it is not so numerous as the pine cone beetle.

SOUTHERN PINE BEETLE (Dendroctonus frontalis Zimm.)

North Carolina Monthly Letter, Bur. Ent., U.S.D.A. (June): In the vicinity of Asheville there seems to be a scarcity of the southern pine beetle following the heavy attacks of last summer and fall. Natural control of this beetle was believed to have been brought about largely through the premature emergence of beetles last fall resulting from unusually warm weather. Because of unfavorable conditions the broods did not overwinter very successfully. Birds also destroyed large numbers of the developing broods during the fall and winter months.

MOUNTAIN PINE BEETLE (Dendroctonus monticolae Hopk.)

Wyoming J. C. Evendon (July 9): For the past three years a serious effort has been made by the Forest Service to prevent an outbreak from spreading into the Yellowstone National Park and destroying the valuable scenic forests of that region. During the past season these insects were discovered in the southwest corner of the park, and during the past two months nearly all of the infested trees have been treated.

PINE CONE BEETLE (Conophthorus conipordae Schwarz)

Massachusetts and Connecticut E. P. Folt (July 21): The pine cone beetle is locally abundant and causing a considerable drop of pine cones at both Danbury, Conn., and Stockbridge, Mass. It has also entered the small twigs of these infested pines, in some instances killing as much as 20 per cent of the shoots on portions of the tree.

WEEVILS (Curculionidae)

Oregon J. A. Beal (July 13): Severe injury to reproduction and remaining trees has been noticed on the Shovlin and Hixon cutting operations in Bend. Practically all of the new needles have withered and died and on this material no terminal growth is anticipated this year. The injury is undoubtedly due to the feeding of adult weevils. Many Magdalis lecontei Horn and a few Cylindrocopturus weevils were actually found feeding on the new growth. The larger weevils feed by boring through the needle sheath into the base of the newly formed needles. They make a large number of holes from which they suck the sap.

A BARK BEETLE (Ips grandicollis Eichh.)

Mississippi

H. Dietrich (July 20): I. grandicollis has killed apparently healthy young loblolly pine along Thompson's Creek, Greene County. The large trees were cut for piling last spring but some were left lying in the woods. The beetles went through a generation in the logs and then attacked the young growth. The logs have been ruined by the larvae of the pine sawyer.

LESSER EASTERN PINE BARK BEETLE (Pityogenes hopkinsi Sw.)

Wisconsin

E. L. Chambers (July 21): Young white pine and Norway pine trees throughout the northern half of the State that were seriously weakened by drought and the pine bark louse are succumbing in large numbers to this borer which kills the young trees outright in Lacrosse County.

A TWIG BORER (Myeloborus ramiperda Sw.)

Massachusetts

J. V. Shaffner, Jr. (July 23): A plantation of evergreens, mostly white pine, of 30 to 40 years' growth and covering 10 to 12 acres of an estate in Beverly, was reported to be infested by a twig borer, M. ramiperda. We found that 10 to 15 per cent of the twigs on the side branches of the white pine trees, especially along the drives, were infested. Adults were secured July 13 and have been identified by Dr. M. W. Blackman.

PINE BARK APHID (Chermes pinicorticis Fitch)

Pennsylvania

J. N. Knull (July 15): The pine bark aphid is unusually abundant on white pine plantations in various parts of the State this year.

Wisconsin

E. N. Chambers (June): 125,000 seedlings have been destroyed by the pine bark louse.

SCOTCH PINE LECANIUM (Toumeyella nurismaticum F. & McD.)

Wisconsin

E. L. Chambers (July 21): Jack pine trees throughout the northern part of the State are heavily infested with the Scotch pine lecanium where the pest was not present last year. In the areas infested last year only a trace remains owing to the work of predators, although many trees succumbed to the attack of the scale.

A PINE SAWFLY (Neodiprion sp.)

Pennsylvania

J. N. Knull (June 23): Numerous pitch pines in this section are heavily infested with one of the pine sawflies.

POPLAR

COTTONWOOD LEAF BEETLE (Lina scripta Fab.)

Ohio E. W. Mondenhall (July 17): A small outbreak of cottonwood leaf beetle found in Springfield on Carolina poplar.

POPLAR LEAF ROLLER (Cacoecia conflictana Walk.)

Maine H. B. Peirson (July 22): About 43,000 acres of poplar has been defoliated near Skinner and Kokadjo. Moths were observed flying on June 23 and larvae are now feeding.

SPRUCE

SPRUCE BUDWORM (Cacoecia fumiferana Clem.)

Wisconsin E. L. Chambers (July 21): Large areas of balsam fir and jack, Norway, and white pine are being defoliated in Bayfield and Douglas Counties. One area, covering nearly an entire township, has had practically every tree completely defoliated and many have been killed outright.

North Dakota J. A. Munro (July 18): Spruce budworm injury has been fairly common in the vicinity of Fargo and a few reports of injury were received from various sections of the State this season.

Wyoming W. C. Heinrich (July 9): An outbreak of this insect was first recorded in Cody Canyon in 1926, and since that time the insects have spread over a tremendous acreage, and have already destroyed a large area of Douglas Fir. For the past two seasons the Bureau of Entomology has attempted the protection of the scenic timber stands along the roadsides and around the many resorts, summer homes, camp sites, etc., through the adoption of a rather extensive spraying program.

A SPRUCE NEEDLEWORM (Epinotia nanana Treit.)

Maine J. V. Schaffner, Jr. (June 25): Observations made in spruce areas in Cumberland, Sagadahoc, Lincoln, and Knox Counties show that the infestation generally is much lighter than in 1930. The feeding on both the red and white spruce is noticeable through this section, especially close to the seacoast. Of all the examinations made in spruce growths none were found that would average more than 35 per cent defoliated. Many moths observed June 15-18, inclusive, indicate an infestation for 1932.

H. B. Peirson (July 22): A heavy spruce webworm infestation along the Maine coast seems to be gaining headway inland. There was a heavy flight July 7.

A SPRUCE NEEDLE MINER (Taniva albolineana Kearf.)

Wisconsin

E. L. Chambers (July 21): Blue spruces and other species were found partially defoliated in many plantings in certain sections of the southeastern portion of the State, and the needles were found to be tunneled by T. albolineana.

A SPRUCE GALL APHID (Adelges abietis L.)

Maine

H. E. Peirson (July 22): The spruce gall aphid is very abundant in the State this year.

Pennsylvania

J. N. Knull (July 15): Many Norway spruces in a plantation in Penfield are infested with the spruce gall aphid.

A GALL APHID (Pineus pinifoliae Fitch)

Maine

J. V. Schaffner, E (July 21): P. pinifoliae was noted as abundant on red spruce in many localities through Sagadahoc, Lincoln, and Knox Counties, June 15 to 18 inclusive. The trees looked as if they were laden with cones, some opened and other green-like unripened cones. Many adults were issuing at this time. (Identified by Dr. P. N. Annand.)

PINE CONE BEETLE (Conophthorus coniperda Sz.)

Pennsylvania

J. N. Knull (July 12): This insect is abundant on the Mont Alto forest this year. Many undeveloped cones are on the ground at the present time.

SYCAMORE

LEAF

SYCAMORE/MINER (Phyllonorycter felinella Hein.)

California

H. Ryan (June 29): Considerable injury was found from the sycamore blotch miner.

A GELECHIID LARVA (Gelechia desiliens Meyrick)

California

H. Ryan (June 29): Reports of sycamore blight in the Santa Monica district were checked by field inspections, which indicated that the greater part of the injury was from the larva of a moth feeding on the upper surface of older leaves and on young leaves. Adults were reared. One tree, 4 feet in diameter and about 60 feet tall, had most of the upper two-thirds of the leaves dry, with some green left only on the lower leaves. This was the most severe injury noted, although all of the sycamores in the immediate vicinity were affected. (Determined by A. Busck.)

A SCALE INSECT (Stomacoccus platani Ferris)

California

H. Ryan (June 29): Considerable injury was found from the sycamore scale, at Los Angeles.

WALNUT

WALNUT CATERPILLAR (Datana integerrima G. & R.)

Virginia

H. G. Walker (July 24): The walnut caterpillar was observed in considerable numbers on several different species of hickory at Norfolk.

MIDRIB WALNUT APHID (Callipterus juglandis Frisch)

Oregon

D. C. Mote (July 13): B. G. Thompson reports finding considerable numbers of mid-rib aphids on walnuts.

WILLOW

EUROPEAN WILLOW BEETLE (Plagiodera versicolora Laich.)

New England

E. P. Felt (July 21): The European willow leaf beetle is generally prevalent, defoliating many willows in southern New England and southern New York.

Connecticut

R. B. Friend (July): Several willows at Farmington were severely injured by this insect during the last month.

Maryland

E. N. Cory and assistants (July 17): This insect is defoliating willows in the vicinity of College Park, Prince Georges County, also in Baltimore County.

Pennsylvania

J. N. Knull (July 10): Willows in the vicinity of Pond Bank, Mont Alto State Forest, Franklin County, are heavily infested.

~~WILM SAWFLY~~ (Cimbex americana Leach)

North Dakota

J. A. Munro (July 18): Specimens of the giant sawfly were received July 1 from A. M. Challey, Wahpeton, Richland County, with a report that they were causing much injury to foliage of willows.

I N S E C T S A F F E C T I N G G R E E N H O U S E A N D

O R N A M E N T A L P L A N T S A N D L A W N S

JAPANESE BEETLE (Popillia japonica Newm.)

Connecticut

E. P. Felt (July 21): An extensive infestation was located on the border of Danbury and Ridgefield.

New Jersey

N. J. State Coll. of Agr., Weekly News Letter. The beetles started to emerge in Gloucester County June 27, Burlington County July 3, Cumberland County July 11, and Monmouth County July 18.

A. N. Caudell: On July 13, at Pennsville, I saw the beetles flying in the hot sun in numbers.

Delaware

L. A. Stearns (July 22): The Japanese beetle is very active on elms along the highway north of Wilmington today.

Maryland

E. M. Cory (July 21): The Japanese beetle is moderately abundant in certain locations.

J. A. Hyslop (July 27): A very heavy infestation of Japanese beetles has developed near Bonnings in the north-eastern section of Washington, D. C.

ASIATIC BEETLE (Anomala orientalis Waterh.)

Connecticut

W. E. Britton (July 23): Beetles are now found in flowers and seem to be fully as abundant as ever in spite of the lead arsenate treatment practiced by many owners. Of course there are many untreated lawns which supply the beetles. The heavy rainfall has favored the lawns and grub injury is not prominent.

AZALEA LACE BUG (Stephanitis pyrioides Scott)

Pennsylvania

E. P. Felt (July 21): The azalea lace bug was reported as abundant and injurious to azaleas in Philadelphia.

TWO-MARKED TREEHOPPER (Enchenopa binotata Say)

Nebraska

M. N. Swenk (July 1): Bittersweet vines are this year heavily infested with the two-marked treehopper, which in some cases has done serious damage to these vines.

CHRYSANTHEMUM LACE BUG (Corvthucha marmorata Uhl.)

Mississippi

R. B. Deen (July 21): Lace bugs were noticed doing considerable damage to foliage of chrysanthemums in Lee County.

FLEA-BEETLES (Haltica litigata Fall.)

Mississippi J. M. Langston (July 23): Flea-beetles belonging to this species were found to be abundant on and causing considerable injury to crepe myrtle at A. & M. College early in July.

CYCLAMEN MITE (Tarsonemus pallidus Banks)

Maryland E. N. Cory and assistants (July 17): Quite a severe infestation of the cyclamen mite in field-grown delphiniums was noted in southern Prince Georges County.

OLEANDER SCALE (Aspidiotus hederae Vallot)

Mississippi H. Gladney (July 17): This scale insect was found seriously infesting asparagus ferns in Ocean Springs, Miss.

IRIS

A SNOUT BEETLE (Mononychus vulpeculus Fab.)

New York W. E. Blauvelt (June 17): Specimens which were attacking blue iris have been received from Batavia.

IRIS BORER (Macronoctua onusta Grote)

Wisconsin E. L. Chambers (July 21): Iris borers are being found by the nursery inspectors doing heavy damage to some plantings of Iris. Several plantings that were condemned were found with more than 50 per cent infestation.

PITTOSPORUM

COTTONY-CUSHION SCALE (Icerya purchasi Mask.)

Mississippi G. L. Bond (July 20): The cottony cushion scale is pretty well scattered all over the city of Laurel, being rapidly brought under control by ladybird beetles, Rodolia cardinalis Muls. The scale has been apparently completely eradicated from many heavily infested pittosporum bushes. The beetles have been found to have migrated to widely separated infestations, Laurel, Jones County.

ROSE

ROSE LEAF BEETLE (Hodonota puncticollis Say.)

Connecticut E. P. Felt (July 21): The rose leaf beetle was extremely abundant and injurious to roses at Westport.

ROSE CURCULIO (Rhynchitidis bicolor Fab.)

Massachusetts E. P. Felt (July 21): The rose curculio was abundant upon roses in the Boston area.

North Dakota J. A. Munro (July 18): Rose curculio injury was reported from points in Grand Forks, Cass, Emmons, Logan, Barnes, and Foster Counties during June.

Wyoming C. L. Corkins (July 20): An unusual number of calls for control methods for the rose snout beetle have been received. Apparently the abundance is above normal.

ROSE SAWFLY (Caliroa aethiops Fab.)

Nebraska M. H. Swenk (July 1): Roses throughout the State were severely attacked.

BRISTLY ROSE SLUG (Cladius isomerus Nort.)

Ohio E. W. Mendenhall (July 13): Rose bushes in several places in the city of Columbus look as if they had been fired. The bristly rose slug skeletonizes the leaves from the under side.

ROSE CHAFER (Macrodactylus subspinosus Fab.)

Wisconsin E. L. Chambers (July 21): Heavy losses have resulted from the ravages to corn, shade trees, and ornamental shrubs in Eau Claire, Monroe, and LaCrosse Counties this summer. The injury took place over large areas whereas it usually is confined to limited areas.

SNOWBERRY

MOURNING-CLOAK BUTTERFLY (Aglais antiopa L.)

Oregon J. A. Beal (July 13): An exceptionally heavy brood of the mourning cloak butterfly occurs over a wide range in eastern and southern Oregon. Its principal food appears to be the snow bush. The spiny black caterpillars move in armies to new feeding grounds and attract much attention. At present many butterflies are emerging from the cocoons which are suspended from the snow bush.

SPIREA

COTTON APHID (Aphis gossypii Glov.)

Mississippi

H. Dietrich (July 20): A. gossypii has become so plentiful on Spiraea in plantings and nurseries at Lucedale that control measures are necessary. It is also very abundant on satsuma in one grove at Lucedale.

SUNFLOWER

HARLEQUIN BUG (Murgantia histrionica Hahn)

South Carolina

F. K. Harrison (July 8): The harlequin bug is reported as attacking Japanese sunflower and Michaelmas daisy at Fairfax.

YEW

BLACK VINE WEEVIL (Brachyrhynchus sulcatus Fab.)

Massachusetts

J. V. Schaffner, Jr. (June 19): Larvae of this species were reported injuring roots of yew trees in an ornamental planting on a private estate. A collection of larvae and pupae were received. Adults began issuing June 19.

VERBENA

A LACEBUG (Telconemis nigrina Champ.)

Mississippi

J. M. Langston (July 23): Lace-bugs of this species were reported as seriously injuring verbena plants at French Camp on June 27.

INSECTS ATTACKING MAN AND
DOMESTIC ANIMALS

MAN

EYE GNATS (Hippelates spp.)

Maryland

F. C. Bishop (July 7): Eye gnats, H. flavipes Loew, were persistently buzzing about the eyes of men in the residential sections of College Park.

South Carolina

D. G. Hall (July 20): At Charleston H. pusio Mall. has been obtained in traps during the spring months, but has not yet been especially annoying to man. At the present time the gnats are becoming more abundant, and we can anticipate the extreme annoyance which occurs during the late summer and fall months in this vicinity.

Georgia

W. E. Dove (July 20): H. pusio Mall. was present in noticeable numbers and was of some annoyance during this season of the year at Waycross. The Commissioner of Health informs us that conjunctivitis due to this species is extremely common during the fall months. It did not cause closing of the schools but it resulted in suspension of a considerable number of children during the fall term. The infection has been known at this locality for several years.

Mississippi

J. P. Kislanko (July 20): Eye gnats are very annoying in Stone and Forrest Counties.

SANDFLIES (Culicoides sp.)

South Carolina
and
Georgia

W. E. Dove and D. G. Hall (July 20): Cages in South Carolina used for recovery of adult sandflies, Culicoides sp., from their breeding places show that several species emerge during the summer when the weather conditions are favorable. They are no so annoying in residences during this season of the year, but feed freely near their breeding places in the marshes.

DOG FLEAS (Ctenocephalus canis Curt.)

General

J. L. Webb (July 28): For the past three weeks this office has been flooded with inquiries both by letter and telephone for control measures to be taken for flea infestation of houses. The city of Washington seems to be pretty well infested as well as the environs, and we have had inquiries from as far north as Massachusetts. It is a little later than usual and the pests seem to be more abundant than usual.

South Carolina and Georgia W. E. Dove (June 20 to July 20): Infestations of dog fleas under residences have been very numerous in South Carolina and Georgia.

Nebraska M. H. Swenk (July 1 to 15): Many reports of the infestation of houses, outbuildings, and premises with fleas in eastern, and especially southeastern, Nebraska continued to come in during the period here covered.

A THrips (Thysanoptera)

Ohio T. H. Parks (July 8 and 15): Frequent complaints were received between July 8 and 15 regarding a small thrips which annoyed people by crawling on the arms and face. The insect had disappeared by July 20.

CHIGGER (Trombicula irritans Riley)

Pennsylvania J. N. Knull: Chiggers are very abundant in the vicinity of Mont Alto this year.

Illinois J. H. Bigger (July 20): Chiggers are very abundant. There have been many reports.

CHIGOE (Tunga penetrans L.)

Mississippi J. M. McEvilly (July 20): Chigoes have been very numerous this season in Pike County.

RAT MITE (Liponyssus bacoti Hirst)

Georgia W. E. Dove (July 15): The tropical rat mite was especially annoying in a residence at Waycross during this spring.

LONE STAR TICK (Amblyomma americanum L.)

South Carolina H. O. Schroeder (July 20): This species of tick is very important as a pest of man and wild animals on the islands in the vicinity of Charleston. They have been found to be annoying throughout the spring months.

Georgia H. O. Schroeder and D. G. Hall (June): On Wassaw Island, near Savannah, the lone star tick was found to be a serious pest of deer, hogs, turkeys, and man.

A TICK (Argasidae)

Idaho C. Wakeland (July 23): A tick, close to Ornithodoros turicata Duges, was collected at Moscow. Four specimens were collected infesting a summer cottage. One specimen engorged. Bites on ear and face of lady occupant caused painful swelling and heavy scab formation.

CATTLE

STABLE FLY (Stomoxys calcitrans L.)

Nebraska

M. H. Swenk (July 1 - 15): Complaints of severe annoyance to livestock by the stable fly, which began to come in during the third week in June, ceased abruptly during the first week in July.

HORSE

HORSE FLIES (Tabanidae)

South Carolina

W. E. Dove (June 30 to July 20): On June 30 the predacious wasps known commonly as "horse guards" were present at Savannah, Ga., averaging one to each animal. Rarely a tabanid could be found. From July 10 to July 20 these wasps averaged two to three to each cow or horse. During this time tabanids could be collected only at protected places away from animals. These wasps occur throughout Florida as well as South Carolina and Georgia, and are said to be very effective in control, but do not get in their work until late in the season.

North Dakota

A. A. Penn (July 3): The black gad fly (Tabanus atratus Fab.) was reported as prevalent and annoying cattle in the vicinity of Ellendale.

Alabama

H. Dietrich (July 20): Horse flies are unusually abundant in southwestern Alabama this summer.

Mississippi

H. Dietrich (July 20): Horse flies are unusually abundant in southeast Mississippi this summer.

Texas

O. G. Babcock (July 7): Tabanids are said to be more abundant through Edwards Plateau country than at any time during the past 12 years.

HORSE BOTFLIES (Gastrophilus spp.)

North Dakota

J. A. Munro (July 18): Horse botflies are causing trouble in Golden Valley, Bowman, Williams, Burke, Grand Forks, Dickey, Ward, and Morton Counties.

POULTRY

STICKTIGHT FLEA (Echidnophaga gallinacea Westw.)

Georgia

E. O. Schroeder (June): An infestation of the sticktight flea was found to occur near Augusta. It was apparently not due to a recent importation.

CHICKEN MITE (Dermanyssus gallinae L.)

North Dakota C. T. Carlson (July 13): Chicken mites are very abundant this year.

H O U S E H O L D A N D S T O R E D - P R O D U C T
I N S E C T S

EUROPEAN EARWIG (Forficula auricularia L.)

Oregon D. C. Mote (July 13): The increased number of requests for information on control indicates that this insect is more abundant this year.

ARGENTINE ANT (Iridomyrmex humilis Mayr)

California Harold Ryan (June 29): In May we had a considerable number of inquiries from property owners in regard to winged ants that came to their notice. In practically all cases the winged male Argentine ant was submitted for identification. No female migratory forms of this ant were turned in.

Mississippi N. L. Douglass (July 18): In the localities where infestations of the Argentine ant occur the results of the control campaigns are pleasing in most cases. It is hoped that the only infestation in Granada County is practically exterminated. Very good results have been obtained in both the infestations in Yalobusha County. The only infestation in Carroll County looks as though at the present time eradication will be possible within the near future. Of the three infestations in Montgomery Co., no Argentine ants have been found thus far this spring at Duck Hill, Miss., and very few at Kilmichael, and while complete eradication at Winona is not in sight yet, a number of the blocks have been cleaned up this year.

CONFUSED FLOUR BEETLE (Tribolium confusum J. Duv.)

Nebraska M. H. Swenk (July 1): A Cass County farmer found his hay mow alive with larvae and beetles of this species developing in the heavy accumulation of hay dust during the last week in June.

WHITE-MARKED SPIDER BEETLE (Ptinus fur L.)

Wisconsin E. L. Chambers (July 22): Several serious infestations of the white-marked spider beetle have been reported in mills in Eau Claire and Green Lake Counties.

TIMBER BEETLE (Nacerda melanura L.)

Massachusetts

A. P. Morse (Jan. to June): There was a local outbreak of this beetle in a newspaper office at Salem. The beetles were quite active, disagreeably in evidence while flying about, both day and evening. They seem to have been brought in through secreting themselves in the folds at the ends of rolls of newspaper stock imported from Dalhousie, New Brunswick. They are said to breed in decayed wood and it seems possible that the large amount of sawdust, bark, and such material in the vicinity of pulp mills might account for their presence in numbers.

J. V. Schaffner, jr. (July 7): A representative of an insecticide company of Boston brought in specimens of N. melanura L. for identification. He reported that these beetles were swarming all over an old four-masted schooner which had been fitted up as a night club and tied up to a wharf in Boston Harbor. His company had been called on to exterminate this insect. On July 16 he reported that the breeding places were located in the lower hold where the insects were boring in the timbers and that instead of the beetles coming from the outside there were swarms of them trying to get out of the boat.

AN ANOBIID BEETLE (Xyletinus peltatus Harr.)

Mississippi

J. Milton (July 21): This species has caused damage to pine floors in a home at Booneville.

PLANT QUARANTINE AND CONTROL ADMINISTRATION

Notes abstracted from "News Letter", July, 1931

(Not for publication)

PINK BOLL WORM (Pectinophora gossypiella Saund.)

The finding of the first pink bollworms in the 1931 cotton crop in the Salt River Valley of Arizona, on May 5 and 6, was mentioned in last month's News Letter. The two fields involved are located about 10 miles southwest of Phoenix and some 15 miles west of the 1930 noncotton zone, in the Laveen section. Since then specimens have been found in two additional fields. On May 11 one larva was found in a field about 6 miles east of the 1930 noncotton zone. An exit hole was found in a green boll from this field on May 22, indicating that the first generation of the current season had already begun to emerge. Since the initial infestation was found, additional specimens have been taken from this field and the two fields about 10 miles southwest of Phoenix mentioned in the July 1 number of the Survey Bulletin. One specimen was taken from a field about 4 miles south of the 1930 noncotton zone on May 29, this being in the Goodyear vicinity.

During May 2,373 samples of bolls were inspected at the San Antonio laboratory, this being the greatest amount inspected any month since the laboratory has been in operation. These samples represented fields in 216 counties in the States of Alabama, Arkansas, Florida, Georgia, Louisiana, Mississippi, Oklahoma, South Carolina, and Texas. Samples had already been inspected from North Carolina and Tennessee. A total of 7,892 samples had been inspected at the close of May, all with negative results.

EUROPEAN CORN BORER (Pyrausta nubilalis Hbn.)

The first European corn borer pupa found in 1931, as reported by the Arlington Laboratory, was collected in the vicinity of Arlington, Mass., on April 16, and the first record of emergence, also in that neighborhood, was made on May 22.

GIPSY MOTH (Porthetria dispar L.)

In New Jersey the work which is being done cooperatively by the Federal and State forces consisted mostly of checking up work around previously infested areas. This was practically completed during the month and no infestations were found. Many of the Federal men in New Jersey were transferred during the last of May to Massachusetts and Connecticut to assist in the spraying work which was being done there during June.

JAPANESE BEETLE (Popillia japonica Newm.)

The earliest emergence of adult Japanese beetles for the season was recorded on May 23 at Andalusia, Pa., when a single specimen was collected in an outdoor nursery frame. Three beetles were collected on May 30 near Chester, Pa., having been discovered on weeds in a hollow along a creek. These recoveries were of beetles which had overwintered under particularly favorable conditions as to protection from severe weather. Consequently their transformation into the adult stage does not represent the normal life cycle of the insect in the region of Philadelphia, where the mass emergence of the beetle will not occur until late in June or early in July.

MEXICAN FRUIT FLY (Anastrepha ludens Loew)

Following the finding of an infestation of the fruit fly in fruit held in storage near Mission, Tex., on April 22, an intensive effort was made to locate and thoroughly examine all fruit held in storage within the quarantined area.

Additional infestations in fruit growing locally in Matamoros were found during the month, bringing the total number of infested premises to 12. On April 15, larvae of the fruit fly were found feeding in half-grown fruit of Sargentia greggii, one of the sapotes. Larvae were also taken from fruit of the white sapote, Casimiroa edulis, of which there are 5 trees growing in Matamoros.

DATE SCALE (Parlatoria blanchardi Targ.)

During the month of May, 33,347 palms were inspected and a single Parlatoria scale was found. This specimen proved to be dead. During the past six months the routine inspectors have found only 3 infested palms; on 2 of these dead scale only was found. The scout inspectors, inspecting small plantings, ornamentals, etc., have located 21 infested palms during the same period, 12 in the Coachella Valley, 7 in the Imperial Valley, and 2 in the Yuma Valley. Sixteen of these palms were of no value and were dug out and destroyed; the remaining 5 were defoliated and torched. In the corresponding six months a year ago 180 infested palms were found.

A THRIOS (Frankliniella helianthi Moulton)

An interception of a sotol bloom stalk (Dasyliion sp.) at Presidio, Tex., on March 22, 1931, bearing thrips, was submitted to J. R. Watson, of Gainesville, Fla., who determined it as this species and further remarked: "This is an interesting lot, as it is the first time it has been recorded outside of California, from where it was described. This is also a new host plant and a decidedly different host plant than that from which it was described, namely, sunflowers. I suppose you have no data as to what part of Mexico this came from." Inquiry from R. B. Lattimore, at Presidio, as to the Mexican origin of the host material,

brought the reply that since it came in a truck and the flowers are rather delicate the probability is that it was collected within a short radius from the port, and that search would be made for the parasite in the neighborhood.

The interesting feature in this case is the addition of a new and unsuspected species to the known hosts of this thrips, and it exemplifies once again the part so frequently played by our inspection force in contributing in an incidental but effective manner to the sum of knowledge on insects and diseases.

INSECT CONDITIONS IN PORTO RICO DURING JUNE, 1931.

M. D. Leonard

Insular Experiment Station, Rio Piedras, Porto Rico.

June beetles, Phyllophaga spp., had so badly stripped the leaves of a young cane field at Isabela early in May according to Dr. G. N. Wolcott that it seemed the plants could hardly recover. However, when I visited it, in company with Dr. Wolcott and J. G. Myers, on June 1, much new growth was present owing to recent heavy rains; the older leaves were badly damaged.

Only two beetles of Phyllophaga portoricensis Smyth were observed during three hours' collecting at the several large lights at the Sugar Company's hotel at Aguirre on the night of June 2 (G.N.W. and M.D.L.). They were entirely absent during the nights of June 27 and 28. (M.D.L.)

Ligyrus tumulosus Burm. adults were common at the lights at the Sugar Company's hotel at Aguirre on the night of June 2, but on the nights of June 27 and 28 only about a half dozen beetles were observed.

The adults of the pink leaf-sheath bug, Lasiochilus divisus Champion, were observed in fair numbers at the lights of the Sugar Company's hotel at Aguirre on the night of June 2, but were scarce on the nights of June 27 and 28.

A leafhopper, Protalebra brasiliensis De Long, has been observed breeding abundantly throughout the month on large patches of Bidens pilosa, locally called margarita or clavelillo, on the edges of the El Morro Golf Course at San Juan. Mr. Wolcott states that this leafhopper is sometimes abundant on cane growing in weedy, sandy fields but that its occurrence on cane is accidental, its common food plant being Wedelia trilobata, (Jour. Dept. Agr. P.R. 5 (3): 31, 1921, erroneously det. by Metcalf as Erythroneura comes Say.) Adults were found commonly on carrots by R. T. Cotton at Rio Piedras in 1917.

On June 2 a scale (Howardia biclavis Comst.), determined by H. Morrison, was called to our attention by Mr. T. B. McClelland, Director of the Federal Experiment Station at Mayaguez. It was abundant on the trunks and branches of a number of shade trees (Gliricidia sepium) of coffee in a large experimental plot which Mr. McClelland has been running for some years. He feels that the scale has considerably interfered with the growth and production of a number of trees.

The "vaquita," Diaprepes spengleri L., was badly stripping the foliage of a number of young grapefruit trees at the Substation grounds at Isabela on June 1. (G.N.W. and M.D.L.). On June 2, in company with J. G. Myers and G. N. Wolcott and Mr. Herbert Osborn, a section of the Aguirre Sugar Company's properties, Santa Isabel, near Guyama was visited to look for egg parasites of Diaprepes. The beetles were exceedingly abundant on a number of good-sized trees of a Ficus, supposedly F. laevigata, growing along several roads through the cane fields, and much stripping of their

foliage had occurred. A number of batches of eggs were found but none appeared to be parasitized. A number of "moca," Andira inermis, H.B.K., trees were also rather badly stripped by the beetles in the same locality.

The green scale, Coccus viridis Green, was observed lightly infesting a number of young grapefruit trees at the Substation at Isabela on June 1. (G.N.W. and M.D.L.).

Owing to heavy rains, growth of windbreaks, and spraying with oil sprays, infestations of the green scale have almost disappeared from plantings of grape-fruit in at least four groves inspected in the vicinity of Isabela. (G.N.W.)

The leaf-beetle Diabrotica graminea Baly was numerous on a small patch of mung beans, about $1\frac{1}{8}$ acre, at the Station grounds at Rio Piedras on June 8. The beetles were doing considerable damage to the blossoms and also some leaf feeding.

The moths of the smaller beet webworm, Zinckenia fascialis Cramer, were not uncommon at the lights of the Sugar Company's hotel at Aguirre on the nights of June 28 and 29. The larvae are rather common beet and Amaranthus feeders on the Island.

A heavy infestation of Corythucha gossypii Fab. in one field of lima beans near Aguadilla has caused appreciable reduction in both quantity and quality of crop. (G.N.W.)

The fall armyworm, Lophygma frugiperda S. & A., was reported by Dr. Wolcott as causing considerable damage during the latter part of the month to the alfalfa at the Isabela Substation. The outbreak, however, was quickly checked, he reports, by cutting the alfalfa and allowing the imported toads, Bufo marinus L., which are numerous, to eat the caterpillars. This insect was reported (through G.N. Wolcott) by T.B. McClelland, Director of the Federal Experiment Station, as causing an outbreak on grass at Mayaguez.

The leaf-tier Dichomeris piperatus Wlsm. seemed to be doing about the same amount of damage when examined on June 1 in the experimental plots at the Isabela Substation as during the previous month. Dr. G.N. Wolcott reports that it continued to be injurious during the month.

The canna leaf-tier, Calpodes ethlius Cramer, was observed to be moderately infesting a number of plants bordering a large entrance driveway near the Substation at Isabela on June 1 (M.D.L., G.N.W., J.G.M.).

The gramma Psara, Psara phaeopteralis Guenée, was abundant, both moths and larvae, on June 28 and 29 on the St. Augustine grass (locally called gramma grass) covering the fairways on the 9-hole golf course of the Sugar Company at Aguirre. Dr. Wolcott reports an outbreak on St. Augustine grass during the latter part of the month about 3 miles southwest of Isabela. The only other previous record of injury in the Island, from Hatillo, in 1921, where the larvae were abundant in a pasture, was according to Dr. Wolcott fully as serious.

The mealybug Orthezia insignis Douglas was present on rose cuttings received on June 4 from a garden in Santurce. The accompanying letter stated that a number of rose bushes were being rather badly injured by the insects and remedial measures were requested.

Dr. G. N. Wolcott reports a high infestation of the pink boll worm, Pectinophora gossypiella Saund., on the first crop of cotton in one field near Aguadilla, often two or three caterpillars being found in one boll or one large caterpillar in a small boll. He states that hard successive rains and the pink boll worm have caused fully 50 per cent loss of the crop in this field. Mr. E. F. Rorke, of the San Juan Ginnery Co., states that the field in Camuy which showed 6 per cent, 10 per cent, and 18 per cent infested bolls, based on counts of 100 bolls on May 1, May 8, and June 6, respectively, increased to 22 per cent and 28 per cent on June 13, and 28, respectively. Two other fields at Camuy showed 4 per cent and 13 per cent infested bolls on June 17 and still another field 12 per cent on June 28. He further reports that a field at Hatillo in which the crop was almost finished had 31 per cent infested bolls by actual count on June 17. The situation is more serious than ever before on the whole North Coast since the infestation is higher earlier in the life of the crop. Excessive rains during the Spring delayed picking and no cotton was brought until June 3. Juan Pastor Rodriguez, General Agricultural Agent for the South Coast, states that by May 15, the date set for completion of the clean-up against pink boll worm, only about 5 per cent destruction of the old plants had been accomplished but that by June 1 about 50 per cent of the old cotton plants in the South Coast had been pulled up and burned and that the work was practically completed by the end of the month. This does not apply, however, to the towns of Guyana, Patillas, and Maunabo where the crop had been planted later, the last of the cotton crop not being purchased from growers until early in June. Mr. Pastor states that by the end of June a large percentage of the wild cotton trees (*algodon sylvestre*) along the roadsides in Guyanilla and Yauco had been cut down and burned; that from Penuelas to Guanica nearly all along the road and some in the interior around the fields had been destroyed; around Ponce, however, and along the road from Santa Isabel to Guyana, including Salinas, not so large a proportion has been destroyed, efforts being concentrated on destruction of the remnants of the cultivated Sea Island crop.

Dr. G. N. Wolcott reports the cotton leaf worm, Alabama argillacea Hubner, very abundant towards the end of June around Isabel and often causing entire defoliation despite efforts of the growers to control the outbreak. Almost daily rains washed off the poison soon after it was applied, thus rendering control difficult. The outbreak did not spread more than 2 miles south of the North Coast and a few scattering caterpillars were just beginning to appear in the cotton around Aguadilla at the end of the month. Dr. Wolcott has observed the moths which were attracted to lights about the dinner table in the house to feed on the juices of dead ripe mangos. He states that this observation will probably also apply to moths in the field feeding on fruits still on the trees or fallen to the ground.

E. F. Rorke reports that new infestations started up during June, in general in the North Coast section but especially about Hatillo, Camuy, and Isabel, where the cotton plants are large and the crop more concentrated.

The cotton leaf-miner, Nepticula gossypii Forbes and Leonard. Many plants showed evidence of considerable mining of the leaves earlier in the life of the crop at Penuelas.

The cotton stainer Dysdercus neglectus Uhler was reported abundant in an old cotton field long past picking on June 25 at Carolina. D. andreae L., by far the most common of the two here, was almost entirely absent. Specimens were submitted to check the determinations. Mr. Flores now believes that the stainers he reported on in April (I.P.S. Bulletin 11 (4):236, June, 1931) were almost all if not entirely neglectus instead of andreae. One specimen of Oncopeltus aulicus Fab. was brought in but I judge it was probably not feeding on the cotton bolls. (Ismael Flores Lugo, Agricultural Agent.

Dysdercus andreae L. has not been troublesome so far during the month on the North Coast and the blister mite Eriophyes gossypii Banks is scarce. (E. F. Rorke)

The black scale, Saissetia nigra Neitner, was present in the greatest abundance in Penuelas that I have yet seen in the island, many plants having the stems and twigs entirely encrusted with the scales.

The cotton leaf blister mite, Eriophyes gossypii Banks, was observed badly infesting many old plants in a field from which the crop had already been picked on June 2 at Penuelas.

The infestation of the "pollilo," Cryptotermes brevis Walk., was reported in one of the government buildings in San Juan. Upon investigation it was found that many valuable records had become infested, some of them so badly as to have been practically destroyed.

OUTSTANDING ENTOMOLOGICAL FEATURES FOR MEXICO FROM JANUARY TO JUNE, 1931.

By F. Garcia Robledo

Chief of the Federal Service for the Defense of Agriculture
San Jacinto, D.F., Mexico

Agrotis ypsilon Rott. constituted the principal pest of corn in the vicinity of Montemorelos and Linares in Nuevo Leon and on the outskirts of Torreon, Coahuila. In the latter place it also severely attacked wheat. A species of Agrotis was also attacking corn in the environs of Ixtlan del Rio in Nayarit during June.

Peridroma sp. started attacks on corn in the vicinity of Ixtlan del Rio, Nayarit, and Tampico, Tamaulipas, during June.

Heliothis obsoleta Fab. is attacking corn in Lower California in the vicinity of Ensenada, also in the Tepic region of Nayarit during March.

In the middle of May Diatraea sp. appeared on sugarcane in the vicinity of Montemorelos, Nuevo Leon, and was also reported from Linares. This insect also attacked sugarcane in June in Ixtlan del Rio. In the month of June Diatraea sp. appeared in the greater part of the Camargo region of Chihuahua in the plantations of corn. It is calculated that 10 per cent of the crop is injured.

Chilo sp. started attacking sugarcane in June in Ixtlan del Rio, in Nayarit.

Wireworms were one of the principal pests of corn in the vicinity of Montemorelos and Linares in Nuevo Leon and were also reported as attacking corn in Colima. Early corn is planted in February and March in the Tampico, region of Tamaulipas and larvae of Elateridae destroy the corn when it begins to germinate.

Phyllophaga larvae attacked corn in Colima, appearing in May and doing much damage.

Sphenarium sp. and Taenionopoda eques Burn. started attacks on corn in the region about Ixtlan del Rio, Nayarit, during June.

Red spiders, Tetranychus sp., were infesting corn in Colima and near Torreon, Coahuila. These insects were very serious during June over the greater part of the Camargo region in Chihuahua.

Estigmene acraea Drury was observed on alfalfa in the district of Lampazos, Nuevo Leon.

The alfalfa caterpillar Autographa gamma californica Speyer, which attacks the leaves and flowers of alfalfa, clover, and likewise barley, pea, and cabbage, had been scarce during the period in Lower California, vicinity of Mexicali.

Cotton is planted in April and May in the vicinity of Yavaros, Sonora, and Anthonomus grandis Boh. causes great damage to this plant every year and requires extensive control measures. This was one of the principal cotton insects during June in the environs of Mier, Tamaulipas, and was also common in Coahuila; although numerous there are no indications that they are making any intensive invasions this year except in the vicinity of Lagunera where control measures were applied.

Alabama argillacea Hbn. is important in Coahuila when it appears early but it is not very common this year and for that reason is not causing serious injury. In general, it occurs about every four years, and at present is of no importance. It was, however, one of the principal cotton insects during June in the Mier region of Tamaulipas, attacking the plants when they are a few days old.

Pectinophora gossypiella Saund. has made its appearance in the plantations of cotton near Camargo, Chihuahua, but its greater activities develop in the fall. The damage done in 1930 is estimated at 41 per cent. It is common in Coahuila, in the vicinity of Torreon; although numerous there are no indications that they are making any intensive invasions this year, except in the vicinity of Lagunera where control measures were applied.

Bucculatrix thurberiella Busck appeared on cotton in Lower California in the vicinity of Mexicali, but was combatted at once in order to prevent great damage.

Estigmene acraea Drury was observed on cotton in the environs of Lampazos, Nuevo Leon.

Pentatomia ligata Say is usually a serious pest of cotton around Camargo, Chihuahua, but most of its damage is noted in the fall. In 1930 it occasioned 27 per cent damage.

Aphis gossypii Gcv. appeared on cotton in the vicinity of Mexicali in Lower California, requiring control measures.

Pieris protodice Boisd. and P. rapae L. attacked cabbage in the district of Lampazos, Nuevo Leon, in March.

Protoparce sexta Johan. attacked tobacco and potato in May and June in the district of Lampazos, Nuevo Leon.

Phthorimaea operculella Zell. attacked potato in district of Ixtlan del Rio in June.

Leptinotarsa multitaeniata Say attacked potato in the Tepic district of Nayarit during March and April.

From March to June, Lactica viridipennis Jacoby attacked the betabel in the district of Camargo, Chihuahua, but was combatted successfully.

Epilachna corrupta Muls. is attacking kidney beans in the district of Tepic, Nayarit, district of Tampico, Tamaulipas, and near Camargo, Chihuahua.

The cultivation of the kidney bean has been started in the vicinity of Torreon, Coahuila. Epilachna varibestis Muls. will probably have to be controlled.

Macrobasis unicolor Kby. was observed in May and June in the district of Lampazos, Nuevo Leon. A second generation will possibly appear in August.

Macrodactylus sp. is attacking peach near Camargo, Chihuahua, and it attacked kidney beans in June in the district of Ixtlan del Rio.

Anthonomus eugenii Cano attacked Chile pepper (*Capsicum*). The greatest activities are to be expected in the fall, in the vicinity of Camargo, Chihuahua.

Cylas formicarius Fab. attacked sweetpotato in the district of Tepic, Nayarit.

Gryllotalpa cultriger Uhler has caused considerable damage to Irish potato, and the sweetpotato called by name of "alacran de papa." in Lower California, vicinity of Ensenada.

Aphis gossypii Glover is a common pest of kidney bean in the vicinity of Linares and Montemorelos, Nuevo Leon, and occasioned some damage to cucurbits in the vicinity of Tampico, Tamaulipas.

Illinoia (Macrosiphum) pisi Kalt. attacked peas and also cotton, clover, horse bean, and the tomato in the vicinity of Lampazos, Nuevo Leon, and was very injurious to peas before the rains commenced this year in the vicinity of Tampico, Tamaulipas.

Brevicoryne brassicae L. attacked cabbage around Camargo, Chihuahua.

Anasa tristis DeG. was observed in the environs of Lampazos, Nuevo Leon, in May.

Murgantia histrionica Hahn attacked cabbage around Camargo, Chihuahua.

Euphorbia basalis Gory and Perch. occasioned some damage to cucurbits in the vicinity of Tampico, Tamaulipas.

The fruit fly Anastrepha ludens Loew started its attacks of the year on mango, papaw, and guava in Colima. A very strict watch is being kept on its movements, by this office (Office for Defense of Agriculture), to work out a vigorous control campaign. It has also been attacking citrus fruits in the district of Ahuacatlan, Nayarit, and most of the fruit of guava in the district of Tampico, Tamaulipas, shows work of this pest.

Anastrepha striata Schiner attacked guava in the district of Tepic, Nayarit, during April. This insect is the predominant pest of cultivated fruits in the district of Matlan de Canas, Nayarit. It also attacked fruit in district of Ixtlan del Rio in June.

The sweet and sour oranges in the Tepic district of Nayarit were observed in March to be attacked by Chrysomphalus aurantii Mask. and C. ficus Ashm. (=monidum L.).

Atta fervens Say attacked citrus fruit in the district of Ahuacatlan, Nayarit.

A black woolly caterpillar has been observed on walnut in the district of Linares, that, although it has not been identified, is possibly Hemerocampa sp. The caterpillar destroys all the leaves of the trees. This pest has not been observed in former years.

Cotinis mutabilis G. and P. var. malina. O. Janson attacked peach near Camargo, Chihuahua.

NOTES ON INSECT CONDITIONS IN COSTA RICA, JUNE, 1931

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Almost all the plants of the genus Citrus are infested by Aleurocanthus woglumi Ashby. Some trees have lost their entire foliage and the branches appear dried up. Nothing has been done to combat the pest up to the present. In April an experiment was made with a fungus, Aschersonia aleurodis, but nothing definite has been ascertained yet about this fungus.

In the coffee plantations situated to the northwest of the capital are numerous badly injured plants. Great numbers of aphids are found on the young leaves. Some coccids and also larvae of Cenostoma coffeellum Stainton which live in the parenchyma of the leaf and destroy it are present. This larva spins a strong cocoon, which is protected by a great number of fine threads. The tips of the infested branches turn black. In some places termites are also found. We have not yet determined the cause of the trouble.

Termites have not been so numerous this year as last. Notwithstanding this, in some parts of the city they are seen in great numbers flying in the afternoons. Some houses of wood are badly damaged.